```
=> d his ful

     (FILE 'HOME' ENTERED AT 08:55:58 ON 23 DEC 2005)

     FILE 'HCAPLUS' ENTERED AT 08:56:53 ON 23 DEC 2005
                E US20040082756?RN
                E US20040082756/PN
L1            1 SEA ABB=ON  PLU=ON  US20040082756/PN
                D ALL
                SEL RN

     FILE 'REGISTRY' ENTERED AT 09:00:04 ON 23 DEC 2005
L2           14 SEA ABB=ON  PLU=ON  (640298-31-3/BI OR 640298-32-4/BI
                OR 640298-33-5/BI OR 640298-34-6/BI OR 640298-36-8/BI
                OR 640298-37-9/BI OR 640298-38-0/BI OR 640298-39-1/BI
                OR 640298-40-4/BI OR 640298-42-6/BI OR 640298-43-7/BI
                OR 640298-45-9/BI OR 7429-90-5/BI OR 7440-50-8/BI)
                D SCAN
                D 1-14 CRN STR
                D L2 7,9,11,13-14 RN STR
                E POLYA/PCT
L3         84035 SEA ABB=ON  PLU=ON  POLYAMIDE/PCT
L4          3118 SEA ABB=ON  PLU=ON  POLYBENZOXAZOLE/PCT
L5         18351 SEA ABB=ON  PLU=ON  POLYCARBONATE/PCT
L6            15 SEA ABB=ON  PLU=ON  L3 AND L4 AND L5
                D SCAN
L7             1 SEA ABB=ON  PLU=ON  L2 AND L6
                D SCAN
L8          2137 SEA ABB=ON  PLU=ON  L3 AND L4
L9             9 SEA ABB=ON  PLU=ON  L2 AND L8
                D SCAN
L10          480 SEA ABB=ON  PLU=ON  L3 AND L5
L11            1 SEA ABB=ON  PLU=ON  L2 AND L10
                D SCAN
L12            9 SEA ABB=ON  PLU=ON  L7 OR L9 OR L11
L13           18 SEA ABB=ON  PLU=ON  L4 AND L5
L14            1 SEA ABB=ON  PLU=ON  L2 AND L13
                D SCAN
L15            1 SEA ABB=ON  PLU=ON  L14 AND L7
L16           12 SEA ABB=ON  PLU=ON  L2 AND (L3 OR L4 OR L5)
L17            9 SEA ABB=ON  PLU=ON  L7 OR L9 OR L11 OR L12
L18            3 SEA ABB=ON  PLU=ON  L16 NOT L17
                D SCAN
L19            0 SEA ABB=ON  PLU=ON  L18 AND L3
L20            3 SEA ABB=ON  PLU=ON  L18 AND L4
L21            0 SEA ABB=ON  PLU=ON  L18 AND L5
                D L20 1-3 FIDE
L22           12 SEA ABB=ON  PLU=ON  L2 AND L4
                D SCAN L2
                E A/CI
L23             SCR 2043

     FILE 'LREGISTRY' ENTERED AT 10:30:54 ON 23 DEC 2005
L24             STR
L25             STR

     FILE 'REGISTRY' ENTERED AT 10:39:27 ON 23 DEC 2005
L26           50 SEA SSS SAM L24 AND L25 AND L23
L27            1 SEA ABB=ON  PLU=ON  L26 AND L4
                D SCAN
L28           50 SEA SSS SAM L24 AND L23
                D SCAN
```

```
L29           1 SEA ABB=ON  PLU=ON  L4 AND L28
                D SCAN
                D QUE STAT
                D QUE STAT L25
L30          50 SEA SSS SAM L25 AND L23
                D SCAN
L31           1 SEA ABB=ON  PLU=ON  L30 AND L4
                D SCAN

     FILE 'LREGISTRY' ENTERED AT 10:56:02 ON 23 DEC 2005
L32             STR L24

     FILE 'REGISTRY' ENTERED AT 10:57:45 ON 23 DEC 2005
L33          50 SEA SSS SAM L32 AND L23
                D SCAN
L34           0 SEA ABB=ON  PLU=ON  L33 AND L4
                D QUE STAT L26
                D QUE STAT L28
                D QUE STAT L30

     FILE 'LREGISTRY' ENTERED AT 11:05:35 ON 23 DEC 2005
L35             STR L25

     FILE 'REGISTRY' ENTERED AT 11:07:04 ON 23 DEC 2005
L36          50 SEA SSS SAM L35 AND L23
                D SCAN
L37           0 SEA ABB=ON  PLU=ON  L36 AND L4
                D SAV
                D L18 RSD
                D L18 2 RSD
                D L18 3 RSD
L38        4045 SEA ABB=ON  PLU=ON  2 333.471.13/RID
L39         755 SEA ABB=ON  PLU=ON  L38 AND L4
L40           3 SEA ABB=ON  PLU=ON  L2 AND L39
L41         628 SEA ABB=ON  PLU=ON  L39 AND (46.150.18/RID OR 591.49.57
                /RID)
L42          35 SEA ABB=ON  PLU=ON  L39 AND 591.49.57/RID
L43           1 SEA ABB=ON  PLU=ON  L40 AND L42

     FILE 'LREGISTRY' ENTERED AT 12:30:27 ON 23 DEC 2005
L44             STR L24
L45             STR L25

     FILE 'REGISTRY' ENTERED AT 12:39:16 ON 23 DEC 2005
L46          50 SEA SSS SAM L44 AND L45 AND L23
L47           6 SEA ABB=ON  PLU=ON  L46 AND L4
                D SCAN
L48       11212 SEA SSS FUL L44 AND L45 AND L23
                SAV L48 HIG453/A
L49        1319 SEA ABB=ON  PLU=ON  L48 AND L4
L50        1310 SEA ABB=ON  PLU=ON  L49 AND L3
L51          15 SEA ABB=ON  PLU=ON  L50 AND L5
                D SCAN
L52           9 SEA ABB=ON  PLU=ON  L2 AND L50
L53           1 SEA ABB=ON  PLU=ON  L2 AND L51
                D SCAN
L54          51 SEA ABB=ON  PLU=ON  L49 AND 1-100/SI

     FILE 'HCAPLUS' ENTERED AT 12:54:29 ON 23 DEC 2005
L55           1 SEA ABB=ON  PLU=ON  L52
                D SCAN
L56         493 SEA ABB=ON  PLU=ON  L39
```

```
L57           1 SEA ABB=ON  PLU=ON  L40
L58         625 SEA ABB=ON  PLU=ON  L49
L59      331987 SEA ABB=ON  PLU=ON  ELEC?(2A)(COMPONENT? OR PART OR
                UNIT OR DEVICE? OR CONTRIVANCE? OR INVENTION? OR
                APPARAT? OR APP## OR IMPLEMENT? OR INSTRUMENT? OR
                TOOL? OR UTENSIL? OR EQUIP?)
L60          39 SEA ABB=ON  PLU=ON  L56 AND L59
L61          77 SEA ABB=ON  PLU=ON  L58 AND L59
                D QUE STAT
L62          93 SEA ABB=ON  PLU=ON  L61 OR L60
L63             QUE ABB=ON  PLU=ON  PRODUC? OR PROD# OR GENERAT? OR
                MANUF? OR MFR# OR CREAT? OR FORM## OR FORMING# OR
                FORMAT? OR MAKE# OR MADE# OR MAKING# OR FABRICAT? OR
                SYNTHESI? OR PREPAR? OR PREP#
L64          84 SEA ABB=ON  PLU=ON  L62 AND L63
L65      138122 SEA ABB=ON  PLU=ON  ELEC?(2A)INSULAT?
L66          40 SEA ABB=ON  PLU=ON  L65 AND L62
                D SCAN TI
L67          17 SEA ABB=ON  PLU=ON  L56 AND L66
L68          36 SEA ABB=ON  PLU=ON  L58 AND L66
L69           1 SEA ABB=ON  PLU=ON  L1 AND L66
L70           5 SEA ABB=ON  PLU=ON  L51
                D SCAN TI

     FILE 'REGISTRY' ENTERED AT 13:09:56 ON 23 DEC 2005
L71           1 SEA ABB=ON  PLU=ON  7429-90-5/RN
                D SCAN
                E 7440-50-8/RN
L72           1 SEA ABB=ON  PLU=ON  7440-50-8/RN
                D SCAN

     FILE 'HCAPLUS' ENTERED AT 13:11:41 ON 23 DEC 2005
L73      367856 SEA ABB=ON  PLU=ON  L71
L74       56003 SEA ABB=ON  PLU=ON  (L71 OR ALUMINUM OR ALUMINIUM OR
                AL)(2A)METAL?
L75      498076 SEA ABB=ON  PLU=ON  L72
L76       62230 SEA ABB=ON  PLU=ON  (L72 OR COPPER OR CU)(2A)METAL?
L77         903 SEA ABB=ON  PLU=ON  L56 OR L58 OR L70
L78           3 SEA ABB=ON  PLU=ON  L77 AND (L74 OR L76)
                D SCAN
                D QUE STAT
L79          40 SEA ABB=ON  PLU=ON  L77 AND L66
L80          42 SEA ABB=ON  PLU=ON  L79 OR L78
L81          40 SEA ABB=ON  PLU=ON  L80 NOT L70

     FILE 'LREGISTRY' ENTERED AT 13:24:52 ON 23 DEC 2005
L82             STR
L83             STR
L84             STR L83
L85             STR L84
L86             STR L85
L87             STR
L88             STR
L89             STR L88
L90             STR L89
L91             STR
L92             STR L91
L93             STR

     FILE 'REGISTRY' ENTERED AT 13:36:44 ON 23 DEC 2005
L94          50 SEA SSS SAM L82
                D RSD
```

```
                D 1 STR
                D 2 STR
                D 2 RSD
L95          50 SEA SSS SAM L83
                D 1 STR
                D RSD
L96          50 SEA SSS SAM L84
                D 1 STR
L97          50 SEA SSS SAM L85
                D RSD
L98          50 SEA SSS SAM L86
                D 1 STR
                D RSD
L99          13 SEA SSS SAM L87
                D 1 STR
                D 2 STR
                D 3 STR

     FILE 'LREGISTRY' ENTERED AT 13:43:57 ON 23 DEC 2005
L100            STR L87

     FILE 'REGISTRY' ENTERED AT 13:44:16 ON 23 DEC 2005
L101         50 SEA SSS SAM L100
                D 1 STR
                D RSD
L102         50 SEA SSS SAM L88
                D 1 STR
                D RSD
L103         50 SEA SSS SAM L88
                D 1 STR
                D RSD
L104         50 SEA SSS SAM L89
                D 1 STR
                D RSD
L105         50 SEA SSS SAM L90
                D 1 STR
                D RSD
                D 2 STR
                D 3 STR
                D 4 STR
                D RSD
                D 4 RSD
                D QUE STAT
L106         50 SEA SSS SAM L91
                D 1 STR
                D RSD
                D 2 STR
                D 2 RSD
L107         50 SEA SSS SAM L93
                D STR
                D RSD

     FILE 'LREGISTRY' ENTERED AT 13:53:05 ON 23 DEC 2005
L108            STR

     FILE 'REGISTRY' ENTERED AT 13:54:32 ON 23 DEC 2005
L109         23 SEA SSS SAM L108
                D 1 STR
                D RSD
L110       2070 SEA ABB=ON  PLU=ON  L49 OR L39
                E ADAMANTANE/CN
L111          1 SEA ABB=ON  PLU=ON  ADAMANTANE/CN
```

```
                D SCAN
                D RSD
L112        1974 SEA ABB=ON  PLU=ON  L110 AND (638.8/RID OR 2508.17/RID
                OR 1839/RID OR 1392.3/RID OR 46.150/RID OR 46.156/RID
                OR 46.383/RID OR 333.200/RID OR 103.10/RID OR 16.145/RI
                D OR 16.138/RID OR 553.5/RID)

     FILE 'HCAPLUS' ENTERED AT 14:02:19 ON 23 DEC 2005
L113         878 SEA ABB=ON  PLU=ON  L112
L114          93 SEA ABB=ON  PLU=ON  L113 AND L59
L115          42 SEA ABB=ON  PLU=ON  L113 AND L80
L116          40 SEA ABB=ON  PLU=ON  L115 NOT L70
L117          29 S L54
L118          67 S L117 OR L116
L119          27 S L118 NOT L116
L120           2 S L116 AND L117
L121          40 S L120 OR L116



=> => d que stat l70
L3         84035 SEA FILE=REGISTRY ABB=ON  PLU=ON  POLYAMIDE/PCT
L4          3118 SEA FILE=REGISTRY ABB=ON  PLU=ON  POLYBENZOXAZOLE/PCT
L5         18351 SEA FILE=REGISTRY ABB=ON  PLU=ON  POLYCARBONATE/PCT
L23               SCR 2043
L44               STR

C=O        C=O        Cy 5
1  2       3  4

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   5

STEREO ATTRIBUTES: NONE
L45               STR

C—NH2      C—NH2      C—O        C—O
1  2       3  4       5  6       7  8


NODE ATTRIBUTES:
NSPEC   IS R      AT   1
NSPEC   IS R      AT   3
NSPEC   IS R      AT   5
NSPEC   IS R      AT   7
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L48        11212 SEA FILE=REGISTRY SSS FUL L44 AND L45 AND L23
L49         1319 SEA FILE=REGISTRY ABB=ON  PLU=ON  L48 AND L4
L50         1310 SEA FILE=REGISTRY ABB=ON  PLU=ON  L49 AND L3
L51           15 SEA FILE=REGISTRY ABB=ON  PLU=ON  L50 AND L5
```

L70 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L51

=> d l70 1-5 ibib abs hitstr hitind

L70 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:1049432 HCAPLUS
DOCUMENT NUMBER: 143:358262
TITLE: Porous resin film, its fabrication, and semiconductor device
INVENTOR(S): Hirata, Akihiro; Funaoka, Sohei; Murayama, Kazumoto; Tada, Masahiro; Yamamoto, Yumiko
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005268532	A2	20050929	JP 2004-78780	2004 0318

PRIORITY APPLN. INFO.: JP 2004-78780 2004 0318

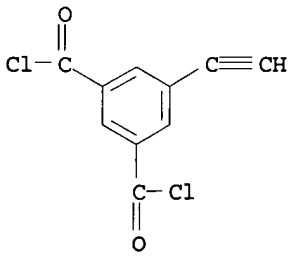
AB A method for efficiently fabricating a porous resin film involves irradiating a resin film of a thermosetting resin including a decomposable component with an activation energy while simultaneously carrying out the decomposition as well as hardening of the thermosetting resin. Specifically, the decomposable component may comprise a thermally decomposable oligomer such as aa polyoxyalkylene, and the thermosetting resin may comprise a benzoxazole resin. A semiconductor device having an interlayer insulator film or protective film from the above porous film is also described.

IT **799810-46-1**
RL: CPS (Chemical process); DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(porous thermosetting resin film, its fabrication by activation energy irradiation, and semiconductor device)

RN 799810-46-1 HCAPLUS
CN Carbonic acid, polymer with 5-ethynyl-1,3-benzenedicarbonyl dichloride, 1,6-hexanediol and 4,4'-(1-methylethylidene)bis[2-aminophenol] (9CI) (CA INDEX NAME)

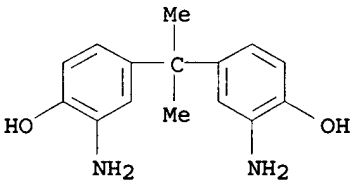
CM 1

CRN 393543-05-0
CMF C10 H4 Cl2 O2



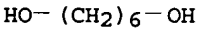
CM 2

CRN 1220-78-6
CMF C15 H18 N2 O2



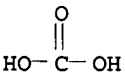
CM 3

CRN 629-11-8
CMF C6 H14 O2



CM 4

CRN 463-79-6
CMF C H2 O3



IC ICM H01L021-312
ICS H01L021-768
CC 76-3 (Electric Phenomena)
IT 675836-29-0, 2,2-Bis(3-amino-4-hydroxyphenyl)propane-5-ethynylisophthalic acid dichloride-Polypropylene glycol bis(2-aminopropyl ether) copolymer **799810-46-1**
RL: CPS (Chemical process); DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(porous thermosetting resin film, its fabrication by activation energy irradiation, and semiconductor device)

L70 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:1019211 HCAPLUS
DOCUMENT NUMBER: 142:31339
TITLE: Porous resin film, manufacture thereof using rapid heating method, and semiconductor device
INVENTOR(S): Hirata, Akihiro; Funaoka, Sohei; Murayama, Kazumoto; Yamamoto, Yumiko; Tada, Masahiro
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

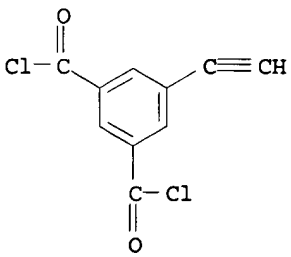
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004335995	A2	20041125	JP 2003-382439	2003 1112
PRIORITY APPLN. INFO.:			JP 2003-113399 A	2003 0417

AB Disclosed is the process comprising a rapid heating step in which a thermosetting resin film is decomposed and hardened simultaneously, thereby forming a porous film. A decomposable component in the resin os polyoxyalkylene oligomer. The step is carried out at a temperature rise speed of ≥50°.min. The porous resin film is used as an interlayer insulating film or a semiconductor protective film of a semiconductor device.

IT **799810-46-1P**
RL: EPR (Engineering process); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(manufacture of porous resin insulating film film for semiconductor device using rapid heating method)
RN 799810-46-1 HCAPLUS
CN Carbonic acid, polymer with 5-ethynyl-1,3-benzenedicarbonyl dichloride, 1,6-hexanediol and 4,4'-(1-methylethylidene)bis[2-aminophenol] (9CI) (CA INDEX NAME)

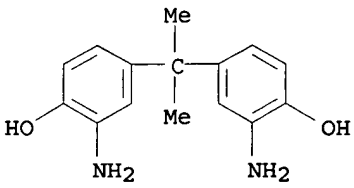
CM 1

CRN 393543-05-0
CMF C10 H4 Cl2 O2



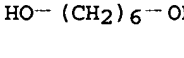
CM 2

CRN 1220-78-6
CMF C15 H18 N2 O2



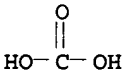
CM 3

CRN 629-11-8
CMF C6 H14 O2



CM 4

CRN 463-79-6
CMF C H2 O3



IC ICM H01L021-312
ICS C08J009-26; H01L021-768; C08L101-00
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 35, 38
IT 675836-29-0P, 2,2-Bis(3-amino-4-hydroxyphenyl)propane-5-ethynylisophthalic acid chloride-polypropylene glycol bis(2-aminopropyl ether) copolymer 799810-44-9P, 4,4'-Diaminodiphenylmethane bismaleimide-polypropylene glycol bis(2-aminopropyl ether) copolymer **799810-46-1P**
RL: EPR (Engineering process); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(manufacture of porous resin insulating film film for semiconductor device using rapid heating method)

L70 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:5185 HCAPLUS
DOCUMENT NUMBER: 140:78187
TITLE: Polymeric insulation for metalization with aluminum and copper
INVENTOR(S): Sezi, Recai; Walter, Andreas; Maltenberger, Anna; Lowack, Klaus; Halik, Marcus
PATENT ASSIGNEE(S): Infineon Technologies Ag, Germany
SOURCE: Eur. Pat. Appl., 41 pp.

CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1375563	A1	20040102	EP 2003-14160	2003 0624
EP 1375563	B1	20050330		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10228769	A1	20040205	DE 2002-10228769	2002 0627
SG 106149	A1	20040930	SG 2003-3514	2003 0625
CN 1472195	A	20040204	CN 2003-145750	2003 0627
JP 2004099873	A2	20040402	JP 2003-184081	2003 0627
US 2004082756	A1	20040429	US 2003-609453	2003 0627

Applicants case

PRIORITY APPLN. INFO.: DE 2002-10228769 A 2002 0627

AB The title materials, which can be easily applied to electronic components and, after cyclization, have good insulating properties and resistance to chems. and heat, are poly(2-hydroxyamides) of specified structure. Adding 95 mmol 2,6-naphthalenedicarbonyl chloride to 100 mmol 4,4'-(diphenylmethylene)bis(2-aminophenol) in N-methylpyrrolidone stirred at 10°, stirring for 1 h at 10° and 1 h at 20°, adding 10 mmol 5-norbornene-2,3-dicaboxylic anhydride in 50 mL γ-butyrolactone dropwise at 10°, and stirring at 10° for 1 h and 20° for 1 h gave a polymer (I). Spin-coating of a solution of I on a wafer, heating at 120, 200, and 425° for 1, 2, and 60 min, resp., and determination of dielec constant and chemical stability are exemplified.

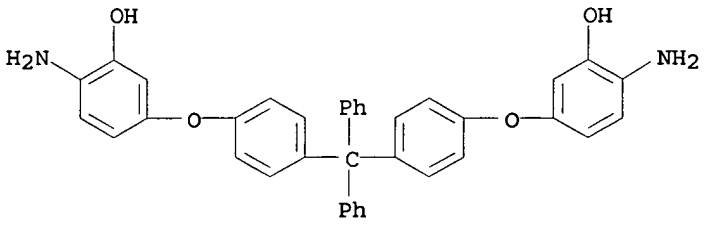
IT **640298-38-0D**, cyclized
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(polymeric insulation for metalization with aluminum and copper)

RN 640298-38-0 HCAPLUS

CN Carbonic acid, polymer with 3,3'-[(diphenylmethylene)bis(4,1-phenyleneoxy)]bis[6-aminophenol], 1,6-hexanediol, 5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride and 5-(2-propenyloxy)-1,3-benzenedicarbonyl dichloride, block (9CI) (CA INDEX NAME)

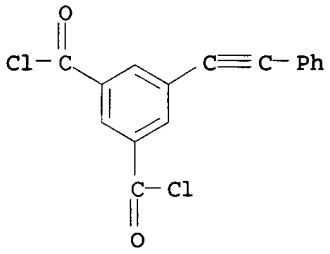
CM 1

CRN 640298-35-7
CMF C37 H30 N2 O4



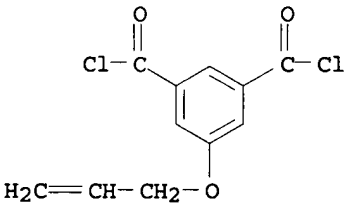
CM 2

CRN 393543-14-1
CMF C16 H8 Cl2 O2



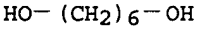
CM 3

CRN 169203-74-1
CMF C11 H8 Cl2 O3



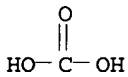
CM 4

CRN 629-11-8
CMF C6 H14 O2



CM 5

CRN 463-79-6
CMF C H2 O3



USP 6,806,314
USP 6,900,284
USP 6,750,317

IC ICM C08G073-22
ICS C08G069-26
CC 38-3 (Plastics Fabrication and Uses)
IT 640298-31-3D, end-capped with norbornenedicarboxylic anhydride, cyclized 640298-32-4D, end-capped with norbornenedicarboxylic anhydride, cyclized 640298-33-5D, end-capped with norbornenedicarboxylic anhydride, cyclized 640298-34-6D, end-capped with norbornenedicarboxylic anhydride, cyclized 640298-36-8D, end-capped with methacrylic acid, cyclized 640298-37-9D, end-capped with methacrylic acid, cyclized **640298-38-0D**, cyclized 640298-39-1D, end-capped with norbornenecarboxylic acid, cyclized 640298-40-4D, end-capped with norbornenecarboxylic acid, cyclized 640298-42-6D, cyclized 640298-43-7D, end-capped with methacrylic acid, cyclized 640298-45-9D, end-capped with norbornenedicarboxylic anhydride, cyclized
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(polymeric insulation for metalization with aluminum and copper)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:41950 HCAPLUS
DOCUMENT NUMBER: 138:108356
TITLE: Photocurable polymers for use in coatings
INVENTOR(S): Halik, Marcus; Walter, Andreas; Lowack, Klaus; Sezi, Recai
PATENT ASSIGNEE(S): Infineon Technologies A.-G., Germany
SOURCE: Ger. Offen., 20 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10131536	A1	20030116	DE 2001-10131536	20010629
US 2003027885	A1	20030206	US 2002-187017	20020701

PRIORITY APPLN. INFO.: DE 2001-10131536 A 20010629

AB The title polymers, with good solubility in organic solvents and good film-forming properties, bear OH groups, amino groups, and aromatic substituents of specified structure. A polymer was prepared from 40 mmol each 2,2-bis(3-amino-4-hydroxyphenyl)-1,1,1,3,3,3-hexafluoropropane and 2,7-biphenylylenedicarboxylic chloride and end-capped with 0.8 mmol cis-endo-5-norbornene-2,3-dicarboxylic anhydride. Photocuring of this polymer and its adhesion to Si, Ti and Ta nitride are exemplified.

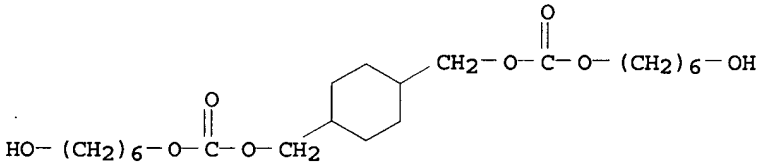
IT **486429-81-6P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable polymers for use in coatings)

RN 486429-81-6 HCAPLUS

CN Carbonic acid, 1,4-cyclohexanediylbis(methylene) bis(6-hydroxyhexyl) ester, polymer with 2,7-biphenylenedicarbonyl dichloride and 3,3'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[6-aminophenol] (9CI) (CA INDEX NAME)

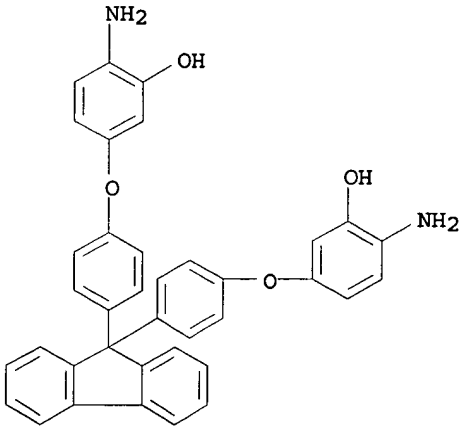
CM 1

CRN 486429-80-5
CMF C22 H40 O8



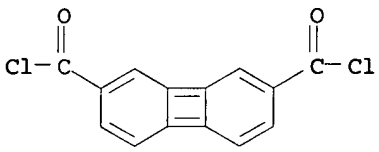
CM 2

CRN 359642-31-2
CMF C37 H28 N2 O4



CM 3

CRN 69417-81-8
CMF C14 H6 Cl2 O2



IC ICM C08G083-00
ICS C09D005-24; C08J003-24; H01L021-312
CC 42-10 (Coatings, Inks, and Related Products)
IT 129-64-6DP, Nadic anhydride, reaction products with biphenylene-containing polymers **486429-81-6P**
486429-82-7DP, nadic-capped 486447-48-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable polymers for use in coatings)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:778021 HCAPLUS
DOCUMENT NUMBER: 137:295383
TITLE: Polyhydroxyamides for polyoxazole coating materials for electronic components
INVENTOR(S): Halik, Marcus; Lowack, Klaus; Sezi, Recai; Walter, Andreas
PATENT ASSIGNEE(S): Infineon Technologies AG, Germany
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002079297	A2	20021010	WO 2002-EP3577	20020328
WO 2002079297	A3	20030130		
W: CN, JP, KR, US				
DE 10115882	A1	20021205	DE 2001-10115882	20010330
US 2004138406	A1	20040715	US 2004-472772	20040210
PRIORITY APPLN. INFO.:			DE 2001-10115882 A	20010330
			WO 2002-EP3577 W	20020328

0328

AB The invention relates to soluble polyhydroxyamide compds. that, in the thermally cured form of their oxazoles, are suited as a elec. insulating, heat-resistant coating material, particularly for metallic and nonmetallic electronic components. A typical polyhydroxyamide was manufactured by stirring NMP containing 10 g 9,9'-bis[4-[(4-amino-3-hydroxy)phenoxy]phenyl]fluorene 1 h with γ-butyrolactone containing 4.83 g 5-ethynylisophthaloyl chloride at 10°, adding NMP containing 7.08 g UC Carb 100 [1,4-cyclohexanedimethanol polycarbonate bis(6-hydroxyhexyl ester)] dropwise, stirring an addnl. 1.5 h at 10°, stirring 12 h at 20°, cooling to 10°, adding NMP containing 5.4 g Et3N, warming to room temperature, and stirring 2 h.

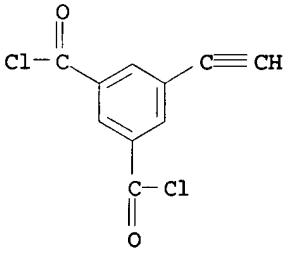
IT **470465-02-2P 470465-04-4P 470465-05-5P 470465-08-8P 470465-09-9P 470465-10-2P 470465-11-3P 470478-06-9P**
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); PREP (Preparation); PROC (Process)
(soluble polyhydroxyamides for heat-resistant polyoxazole coating materials for electronic components)

RN 470465-02-2 HCAPLUS

CN Carbonic acid, polymer with 3,3'-diamino[1,1'-biphenyl]-4,4'-diol, 5-ethynyl-1,3-benzenedicarbonyl dichloride and 1,6-hexanediol, block (9CI) (CA INDEX NAME)

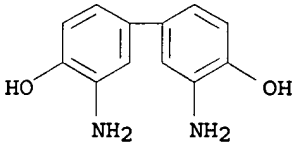
CM 1

CRN 393543-05-0
CMF C10 H4 Cl2 O2



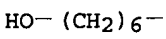
CM 2

CRN 4194-40-5
CMF C12 H12 N2 O2



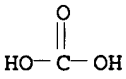
CM 3

CRN 629-11-8
CMF C6 H14 O2



CM 4

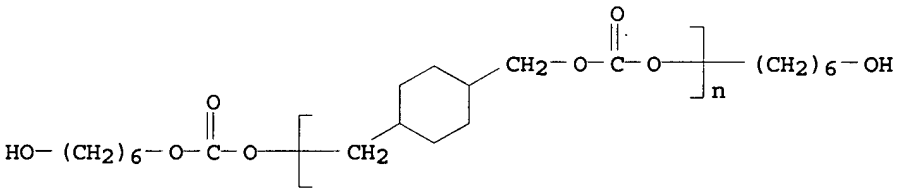
CRN 463-79-6
CMF C H2 O3



RN 470465-04-4 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, polymer with 1,4-benzenedicarbonyl dichloride, 1,2-ethanediol, 3,3'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[6-aminophenol] and α-(6-hydroxyhexyl)-ω-[[[(6-hydroxyhexyl)oxy]carbonyl]oxy]poly(oxycarbonyloxymethylene-1,4-cyclohexanediylmethylene), block (9CI) (CA INDEX NAME)

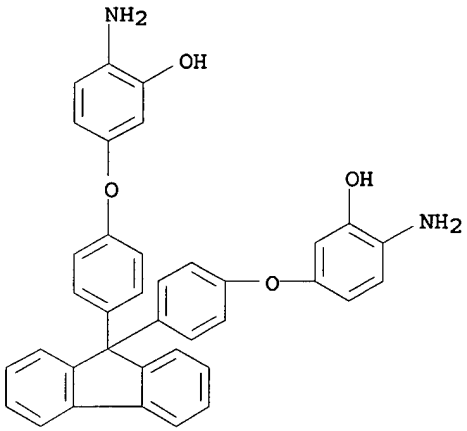
CM 1

CRN 470465-03-3
CMF (C9 H14 O3)n C13 H26 O5
CCI PMS



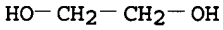
CM 2

CRN 359642-31-2
CMF C37 H28 N2 O4



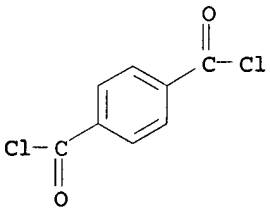
CM 3

CRN 107-21-1
CMF C2 H6 O2



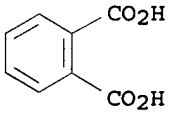
CM 4

CRN 100-20-9
CMF C8 H4 Cl2 O2



CM 5

CRN 88-99-3
CMF C8 H6 O4

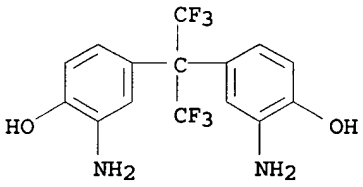


RN 470465-05-5 HCAPLUS

CN Carbonic acid, polymer with 1,6-hexanediol, 4,4'-oxybis[benzoyl chloride] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol], block (9CI) (CA INDEX NAME)

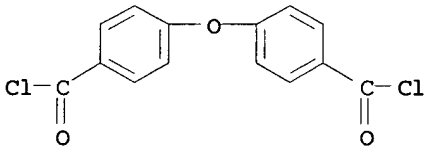
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



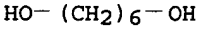
CM 2

CRN 7158-32-9
CMF C14 H8 Cl2 O3



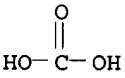
CM 3

CRN 629-11-8
CMF C6 H14 O2



CM 4

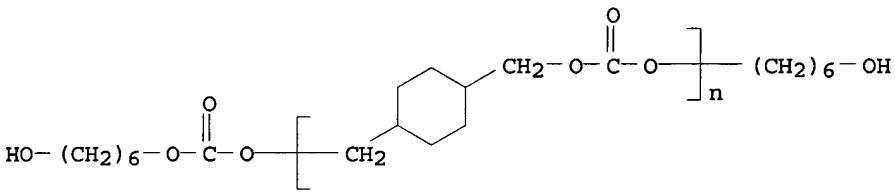
CRN 463-79-6
CMF C H2 O3



RN 470465-08-8 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, polymer with 3,3'-diamino[1,1'-biphenyl]-4,4'-diol and α-(6-hydroxyhexyl)-ω-[[[(6-hydroxyhexyl)oxy]carbonyl]oxy]poly(oxycarbonyloxymethylene-1,4-cyclohexanediylmethylene), block (9CI) (CA INDEX NAME)

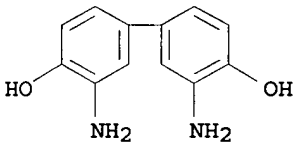
CM 1

CRN 470465-03-3
CMF (C9 H14 O3)n C13 H26 O5
CCI PMS



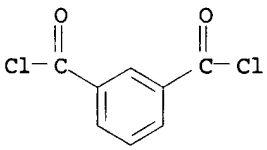
CM 2

CRN 4194-40-5
CMF C12 H12 N2 O2



CM 3

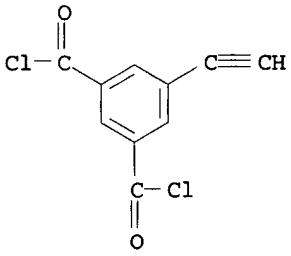
CRN 99-63-8
CMF C8 H4 Cl2 O2



RN 470465-09-9 HCAPLUS
CN Carbonic acid, polymer with 1,4-cyclohexanedimethanol, 5-ethynyl-1,3-benzenedicarbonyl dichloride and 4,4'-(9H-fluoren-9-ylidene)bis[2-aminophenol], block (9CI) (CA INDEX NAME)

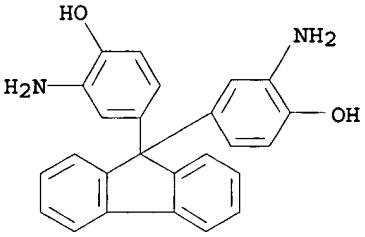
CM 1

CRN 393543-05-0
CMF C10 H4 Cl2 O2



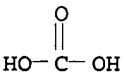
CM 2

CRN 20638-07-7
CMF C25 H20 N2 O2



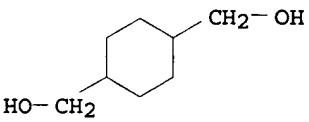
CM 3

CRN 463-79-6
CMF C H2 O3



CM 4

CRN 105-08-8
CMF C8 H16 O2

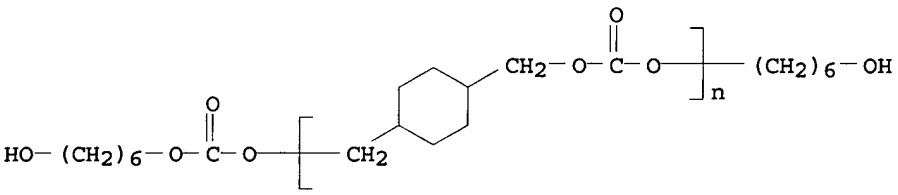


RN 470465-10-2 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-ethynyl-, polymer with 4,4'-(9H-fluoren-9-ylidene)bis[2-aminophenol] and α-(6-hydroxyhexyl)-ω-[[[(6-hydroxyhexyl)oxy]carbonyl]oxy]poly(oxycarbonyloxymethylene-1,4-

cyclohexanediylmethylene), block (9CI) (CA INDEX NAME)

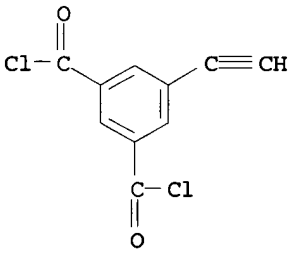
CM 1

CRN 470465-03-3
CMF (C9 H14 O3)n C13 H26 O5
CCI PMS



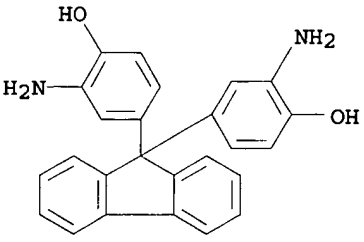
CM 2

CRN 393543-05-0
CMF C10 H4 Cl2 O2



CM 3

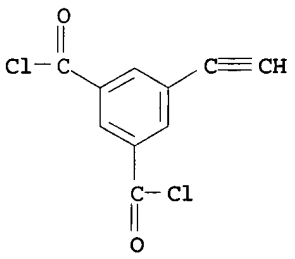
CRN 20638-07-7
CMF C25 H20 N2 O2



RN 470465-11-3 HCAPLUS
CN Carbonic acid, polymer with 5-ethynyl-1,3-benzenedicarbonyl dichloride, 3,3'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[6-aminophenol] and 1,6-hexanediol, block (9CI) (CA INDEX NAME)

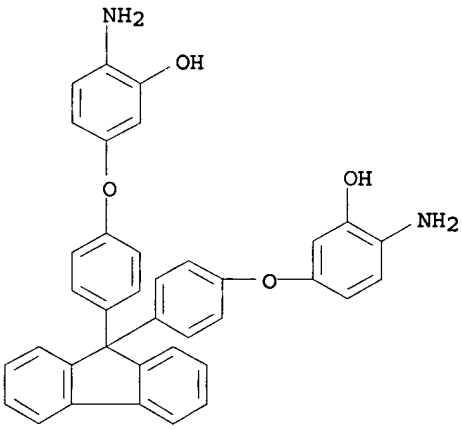
CM 1

CRN 393543-05-0
CMF C10 H4 Cl2 O2



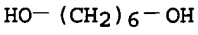
CM 2

CRN 359642-31-2
CMF C37 H28 N2 O4



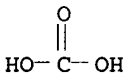
CM 3

CRN 629-11-8
CMF C6 H14 O2



CM 4

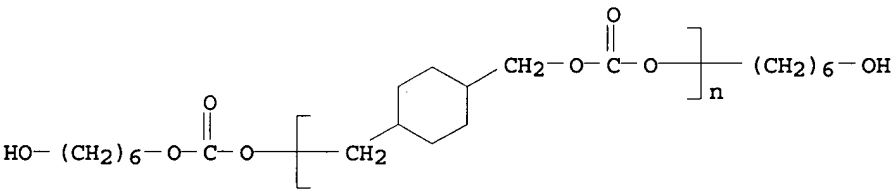
CRN 463-79-6
CMF C H2 O3



RN 470478-06-9 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-ethynyl-, polymer with 3,3'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[6-aminophenol] and α-(6-hydroxyhexyl)-ω-[[[(6-hydroxyhexyl)oxy]carbonyl]oxy]poly(oxycarbonyloxymethylene-1,4-cyclohexanediylmethylene), block (9CI) (CA INDEX NAME)

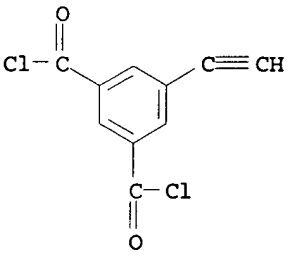
CM 1

CRN 470465-03-3
CMF (C9 H14 O3)n C13 H26 O5
CCI PMS



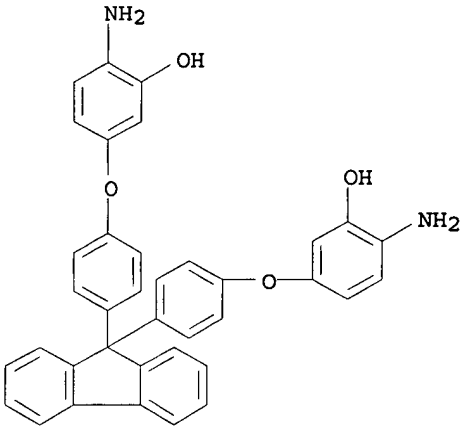
CM 2

CRN 393543-05-0
CMF C10 H4 Cl2 O2



CM 3

CRN 359642-31-2
CMF C37 H28 N2 O4



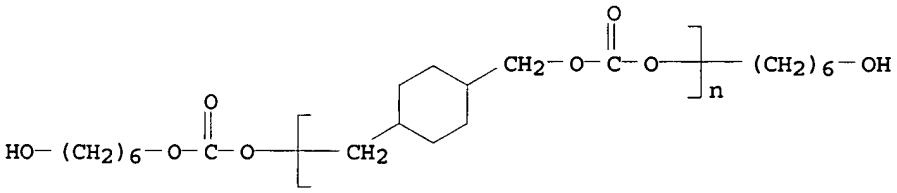
IT **470465-12-4P 470465-13-5P 470465-14-6P**
470465-15-7P
RL: IMF (Industrial manufacture); PREP (Preparation)
(soluble polyhydroxyamides for heat-resistant polyoxazole coating materials for electronic components)

RN 470465-12-4 HCAPLUS

CN 1,8-Anthracenedicarbonyl dichloride, polymer with α-(6-hydroxyhexyl)-ω-[[[(6-hydroxyhexyl)oxy]carbonyl]oxy]poly(oxycarbonyloxymethylene-1,4-cyclohexanediylmethylene), 4,4'-oxybis[benzoyl chloride] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol], block (9CI) (CA INDEX NAME)

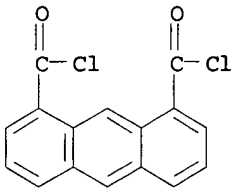
CM 1

CRN 470465-03-3
CMF (C9 H14 O3)n C13 H26 O5
CCI PMS



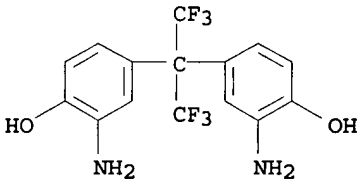
CM 2

CRN 90885-92-0
CMF C16 H8 Cl2 O2



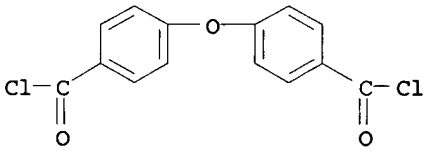
CM 3

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 4

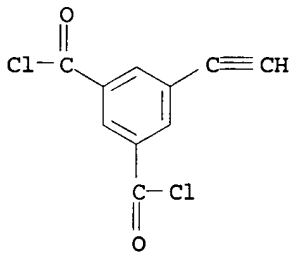
CRN 7158-32-9
CMF C14 H8 Cl2 O3



RN 470465-13-5 HCAPLUS
CN Carbonic acid, polymer with 5-ethynyl-1,3-benzenedicarbonyl dichloride, 3,3'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[6-aminophenol], 1,6-hexanediol and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol], block (9CI) (CA INDEX NAME)

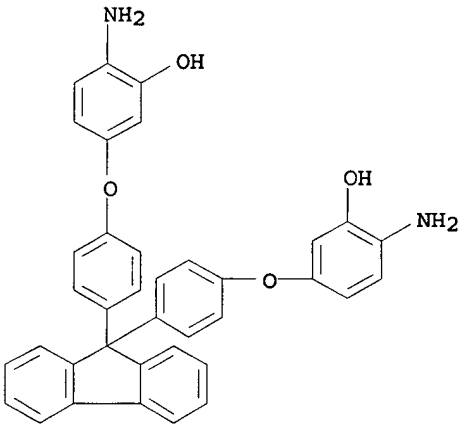
CM 1

CRN 393543-05-0
CMF C10 H4 Cl2 O2



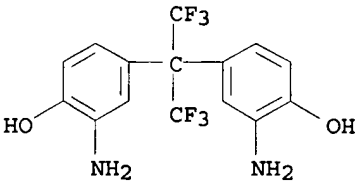
CM 2

CRN 359642-31-2
CMF C37 H28 N2 O4



CM 3

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



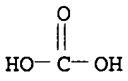
CM 4

CRN 629-11-8
CMF C6 H14 O2

HO—$(CH_2)_6$—OH

CM 5

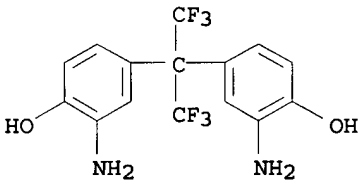
CRN 463-79-6
CMF C H2 O3



RN 470465-14-6 HCAPLUS
CN Carbonic acid, polymer with 1,4-benzenedicarbonyl dichloride, 1,6-hexanediol and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol], block (9CI) (CA INDEX NAME)

CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



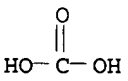
CM 2

CRN 629-11-8
CMF C6 H14 O2

HO—$(CH_2)_6$—OH

CM 3

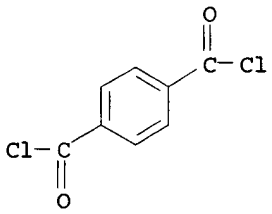
CRN 463-79-6
CMF C H2 O3



CM 4

CRN 100-20-9

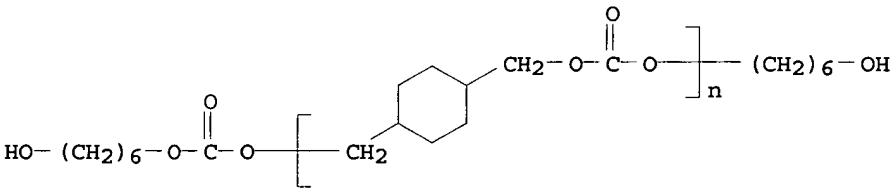
CMF C8 H4 Cl2 O2



RN 470465-15-7 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-ethynyl-, polymer with 1,4-benzenedicarbonyl dichloride, 3,3'-diamino[1,1'-biphenyl]-4,4'-diol, 3,3'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[6-aminophenol] and α-(6-hydroxyhexyl)-ω-[[[(6-hydroxyhexyl)oxy]carbonyl]oxy]poly(oxycarbonyloxymethylene-1,4-cyclohexanediylmethylene), block (9CI) (CA INDEX NAME)

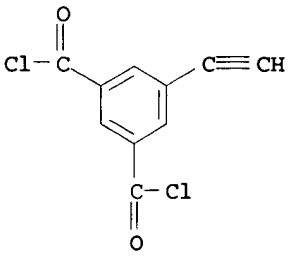
CM 1

CRN 470465-03-3
CMF (C9 H14 O3)n C13 H26 O5
CCI PMS



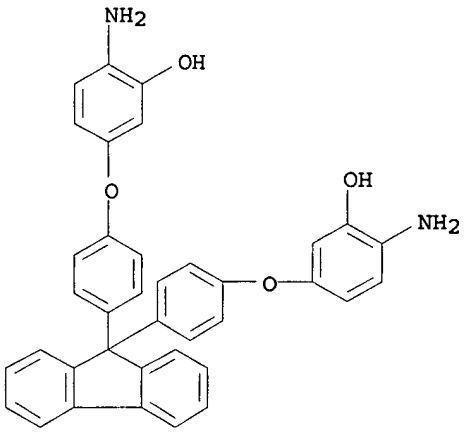
CM 2

CRN 393543-05-0
CMF C10 H4 Cl2 O2



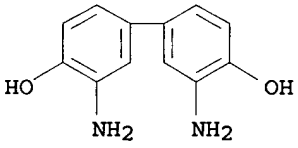
CM 3

CRN 359642-31-2
CMF C37 H28 N2 O4



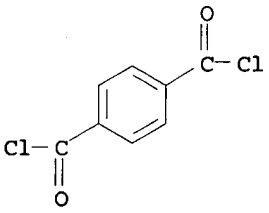
CM 4

CRN 4194-40-5
CMF C12 H12 N2 O2



CM 5

CRN 100-20-9
CMF C8 H4 Cl2 O2



IC ICM C08G069-26
ICS C08G069-32; C08G073-22; H01B003-30
CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 76
IT 470465-01-1P **470465-02-2P 470465-04-4P**
470465-05-5P 470465-06-6P 470465-07-7P
470465-08-8P 470465-09-9P 470465-10-2P
470465-11-3P 470478-06-9P
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP

(Physical, engineering or chemical process); PRP (Properties);
PREP (Preparation); PROC (Process)
(soluble polyhydroxyamides for heat-resistant polyoxazole coating materials for electronic components)

IT **470465-12-4P 470465-13-5P 470465-14-6P**
470465-15-7P 470465-16-8P
RL: IMF (Industrial manufacture); PREP (Preparation)
(soluble polyhydroxyamides for heat-resistant polyoxazole coating materials for electronic components)

=> => d que stat l121
L3 84035 SEA FILE=REGISTRY ABB=ON PLU=ON POLYAMIDE/PCT
L4 3118 SEA FILE=REGISTRY ABB=ON PLU=ON POLYBENZOXAZOLE/PCT
L5 18351 SEA FILE=REGISTRY ABB=ON PLU=ON POLYCARBONATE/PCT
L23 SCR 2043
L38 4045 SEA FILE=REGISTRY ABB=ON PLU=ON 2 333.471.13/RID
L39 755 SEA FILE=REGISTRY ABB=ON PLU=ON L38 AND L4
L44 STR

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE
L45 STR

NODE ATTRIBUTES:
NSPEC IS R AT 1
NSPEC IS R AT 3
NSPEC IS R AT 5
NSPEC IS R AT 7
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE
L48 11212 SEA FILE=REGISTRY SSS FUL L44 AND L45 AND L23
L49 1319 SEA FILE=REGISTRY ABB=ON PLU=ON L48 AND L4
L50 1310 SEA FILE=REGISTRY ABB=ON PLU=ON L49 AND L3
L51 15 SEA FILE=REGISTRY ABB=ON PLU=ON L50 AND L5
L54 51 SEA FILE=REGISTRY ABB=ON PLU=ON L49 AND 1-100/SI
L56 493 SEA FILE=HCAPLUS ABB=ON PLU=ON L39
L58 625 SEA FILE=HCAPLUS ABB=ON PLU=ON L49
L59 331987 SEA FILE=HCAPLUS ABB=ON PLU=ON ELEC?(2A)(COMPONENT? OR PART OR UNIT OR DEVICE? OR CONTRIVANCE? OR INVENTION ? OR APPARAT? OR APP## OR IMPLEMENT? OR INSTRUMENT? OR TOOL? OR UTENSIL? OR EQUIP?)
L60 39 SEA FILE=HCAPLUS ABB=ON PLU=ON L56 AND L59

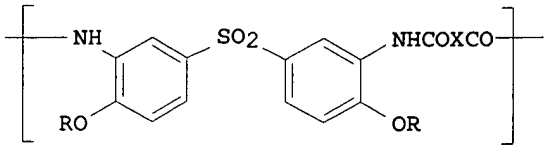
```
L61          77 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L58 AND L59
L62          93 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L61 OR L60
L65      138122 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ELEC?(2A)INSULAT?
L66          40 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L65 AND L62
L70           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L51
L71           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  7429-90-5/RN
L72           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  7440-50-8/RN
L74       56003 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L71 OR ALUMINUM OR
                ALUMINIUM OR AL)(2A)METAL?
L76       62230 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L72 OR COPPER OR
                CU)(2A)METAL?
L77         903 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L56 OR L58 OR L70
L78           3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L77 AND (L74 OR L76)
L79          40 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L77 AND L66
L80          42 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L79 OR L78
L110       2070 SEA FILE=REGISTRY ABB=ON  PLU=ON  L49 OR L39
L112       1974 SEA FILE=REGISTRY ABB=ON  PLU=ON  L110 AND (638.8/RID
                OR 2508.17/RID OR 1839/RID OR 1392.3/RID OR 46.150/RID
                OR 46.156/RID OR 46.383/RID OR 333.200/RID OR 103.10/RI
                D OR 16.145/RID OR 16.138/RID OR 553.5/RID)
L113        878 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L112
L115         42 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L113 AND L80
L116         40 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L115 NOT L70
L117         29 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L54
L120          2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L116 AND L117
L121         40 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L120 OR L116


=> d l121 1-40 ibib abs hitstr hitind

L121 ANSWER 1 OF 40  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        2005:1216382  HCAPLUS
DOCUMENT NUMBER:         143:485818
TITLE:                   Positive-working photosensitive resin
                         composition containing polybenzoxazole
                         precursor, pattern formation and
                         electronic device using it
INVENTOR(S):             Minegishi, Tomonori; Iwashita, Kenichi; Ueda,
                         Mitsuru; Toyokawa, Ikuhiro; Ando, Shinji
PATENT ASSIGNEE(S):      Hitachi Chemical Co., Ltd., Japan; The
                         Promotion of Science and Engineering
SOURCE:                  Jpn. Kokai Tokkyo Koho, 16 pp.
                         CODEN: JKXXAF
DOCUMENT TYPE:           Patent
LANGUAGE:                Japanese
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     ---------------     ----   --------    --------------------
     --------
     JP 2005321466        A2    20051117    JP 2004-137583
                                                                    2004
                                                                    0506
PRIORITY APPLN. INFO.:                      JP 2004-137583
                                                                    2004
                                                                    0506

GI
```



I

AB The composition contains polybenzoxazole precursor with a structural unit I (X = bivalent organic group; R = H, monovalent organic group) and a compound generating an acid by radiation exposure. The method comprises steps for (1) coating a support with the composition and drying it for forming a layer, (2) developing an exposed layer with an alkaline aqueous solution for forming a pattern, and (3) ring-closing the precursor in the pattern for changing into a polybenzoxazole. The device has a pattern layer manufactured by the method, used for an intermediate insulating layer and/or a surface protective layer. The composition shows improved light transmittance (Hg i-ray), sensitivity, developability, and sharpness.

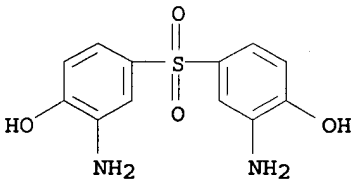
IT **51202-69-8P 869348-02-7P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(pos.-working photosensitive resin composition containing polybenzoxazole precursor and acid generator for manufacture of **elec. device**)

RN 51202-69-8 HCAPLUS

CN Benzoyl chloride, 4,4'-oxybis-, polymer with 4,4'-sulfonylbis[2-aminophenol] (9CI) (CA INDEX NAME)

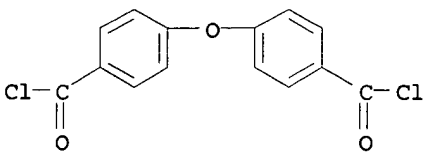
CM 1

CRN 7545-50-8
CMF C12 H12 N2 O4 S



CM 2

CRN 7158-32-9
CMF C14 H8 Cl2 O3

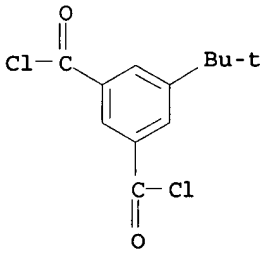


RN 869348-02-7 HCAPLUS

CN 1,3-Benzenedicarbonyl dichloride, 5-(1,1-dimethylethyl)-, polymer with 4,4'-sulfonylbis[2-aminophenol] (9CI) (CA INDEX NAME)

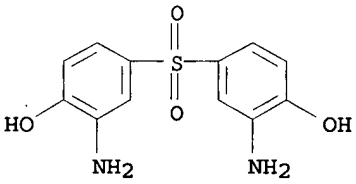
CM 1

CRN 13239-25-3
CMF C12 H12 Cl2 O2



CM 2

CRN 7545-50-8
CMF C12 H12 N2 O4 S



IC ICM G03F007-039
ICS C08G073-22; G03F007-037; G03F007-40; H01L021-027
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76
ST pos photosensitive resin polybenzoxazole polysulfone acid generator; **electronic device insulator**
photosensitive resin
IT Polysulfones, preparation
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(polyamide-polyether-; pos.-working photosensitive resin composition containing polybenzoxazole precursor and acid generator for manufacture of **elec. device**)
IT Polyethers, preparation
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(polyamide-polysulfone-; pos.-working photosensitive resin composition containing polybenzoxazole precursor and acid generator for manufacture of **elec. device**)
IT Polysulfones, preparation
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(polybenzoxazole-; pos.-working photosensitive resin composition containing polybenzoxazole precursor and acid generator for manufacture

of **elec. device**)

IT Polyamides, preparation
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(polyether-polysulfone-; pos.-working photosensitive resin composition containing polybenzoxazole precursor and acid generator for manufacture of **elec. device**)

IT Polybenzoxazoles
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(polysulfone-; pos.-working photosensitive resin composition containing polybenzoxazole precursor and acid generator for manufacture of **elec. device**)

IT Dielectric films
Electric apparatus
Photoimaging materials
(pos.-working photosensitive resin composition containing polybenzoxazole precursor and acid generator for manufacture of **elec. device**)

IT 152431-50-0 152431-52-2
RL: CAT (Catalyst use); USES (Uses)
(acid generator; pos.-working photosensitive resin composition containing polybenzoxazole precursor and acid generator for manufacture of **elec. device**)

IT **51202-69-8P** 56793-42-1P **869348-02-7P**
869348-03-8P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(pos.-working photosensitive resin composition containing polybenzoxazole precursor and acid generator for manufacture of **elec. device**)

L121 ANSWER 2 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:1003227 HCAPLUS
DOCUMENT NUMBER: 143:287553
TITLE: Polybenzoxazoles, their precursors, their resin films having small and uniform pores, and semiconductor devices having their films
INVENTOR(S): Ono, Koji; Matsutani, Mihoko; Enoki, Naoshi
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005247997	A2	20050915	JP 2004-59873	2004 0303

PRIORITY APPLN. INFO.: JP 2004-59873 2004 0303

AB The precursors have active ester or carboxy groups on the side and/or the main chains. The polybenzoxazoles are useful for interlayer insulators and etching protective layers for semiconductor devices. Thus, polymerizing 2,2-bis(3-amino-4-hydroxyphenyl)hexafluoropropane, 3,5-bis(3-hydroxy-4-

aminophenoxy)benzoic acid 3-pyridyl ester, 5-phenylethynylisophthaloyl dichloride, 5-ethynylisophthaloyl dichloride, and polypropylene glycol bis(2-aminopropyl) ether, applying a varnish of the resulting polybenzoxazole precursor on a SiC semiconductor substrate, and heating at 250° for 1 h then at 420° for 1 h gave a dielec. layer showing Tg ≥450°, thermal decomposition temperature 570°, dielec. constant 1.82, and pore size ≤2 nm.

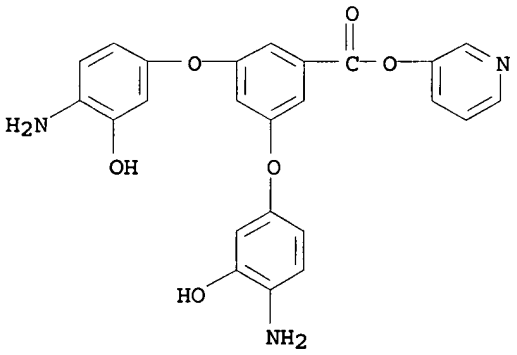
IT **864453-33-8P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-3,5-bis(3-hydroxy-4-aminophenoxy)benzoic acid 3-pyridyl ester-5-ethynylisophthaloyl dichloride-5-phenylethynylisophthaloyl dichloride-polypropylene glycol bis(2-aminopropyl) ether block copolymer **864453-34-9P 864453-35-0P 864453-36-1P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole porous films with small and uniform pore size for semiconductor device dielec. layers)

RN 864453-33-8 HCAPLUS

CN Benzoic acid, 3,5-bis(4-amino-3-hydroxyphenoxy)-, 3-pyridinyl ester, polymer with α-(2-aminopropyl)-ω-(2-aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)], 5-ethynyl-1,3-benzenedicarbonyl dichloride, 5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol], block (9CI) (CA INDEX NAME)

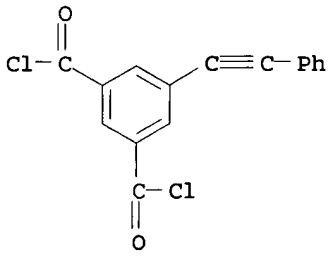
CM 1

CRN 823814-64-8
CMF C24 H19 N3 O6



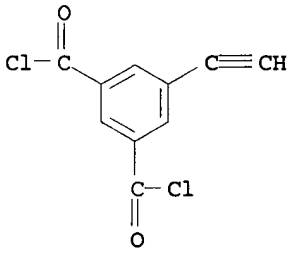
CM 2

CRN 393543-14-1
CMF C16 H8 Cl2 O2



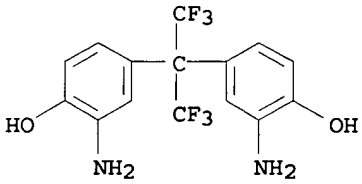
CM 3

CRN 393543-05-0
CMF C10 H4 Cl2 O2



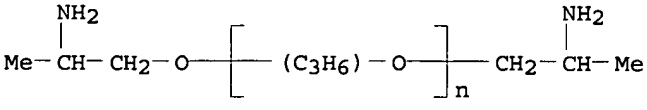
CM 4

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 5

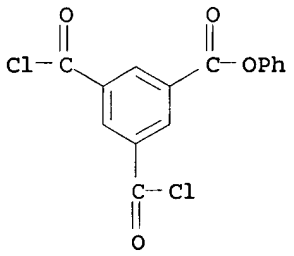
CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



RN 864453-34-9 HCAPLUS
CN Benzoic acid, 3,5-bis(chlorocarbonyl)-, phenyl ester, polymer with α-(2-aminopropyl)-ω-(2-aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)], 5-ethynyl-1,3-benzenedicarbonyl dichloride, 5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol], block (9CI) (CA INDEX NAME)

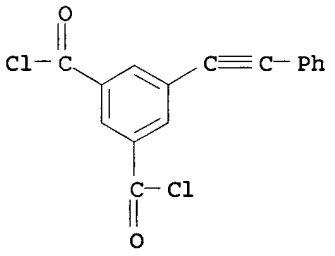
CM 1

CRN 847449-90-5
CMF C15 H8 Cl2 O4



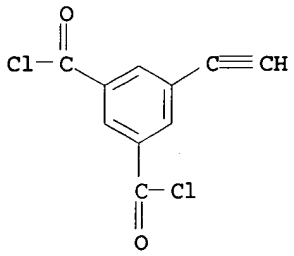
CM 2

CRN 393543-14-1
CMF C16 H8 Cl2 O2



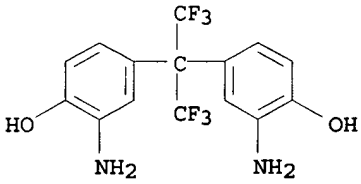
CM 3

CRN 393543-05-0
CMF C10 H4 Cl2 O2



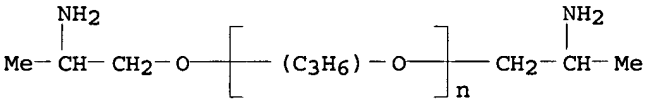
CM 4

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 5

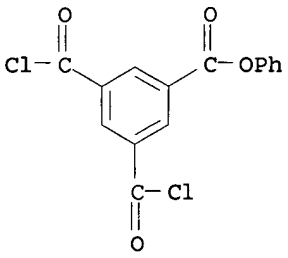
CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



RN 864453-35-0 HCAPLUS
CN Benzoic acid, 3,5-bis(4-amino-3-hydroxyphenoxy)-, 3-pyridinyl ester, polymer with α-(2-aminopropyl)-ω-(2-aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)], 5-ethynyl-1,3-benzenedicarbonyl dichloride, phenyl 3,5-bis(chlorocarbonyl)benzoate, 5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol], block (9CI) (CA INDEX NAME)

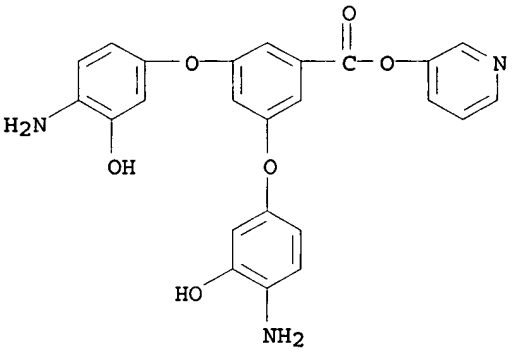
CM 1

CRN 847449-90-5
CMF C15 H8 Cl2 O4



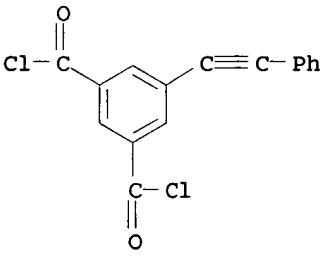
CM 2

CRN 823814-64-8
CMF C24 H19 N3 O6



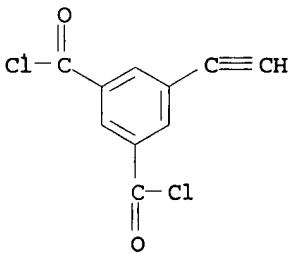
CM 3

CRN 393543-14-1
CMF C16 H8 Cl2 O2



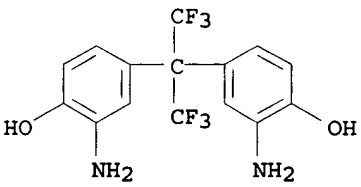
CM 4

CRN 393543-05-0
CMF C10 H4 Cl2 O2



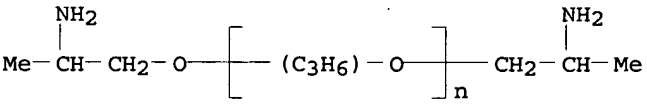
CM 5

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 6

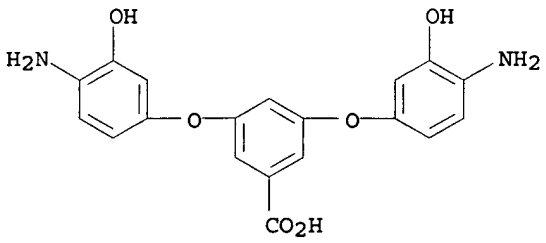
CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



RN 864453-36-1 HCAPLUS
CN Benzoic acid, 3,5-bis(4-amino-3-hydroxyphenoxy)-, polymer with α-(2-aminopropyl)-ω-(2-aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)], 5-ethynyl-1,3-benzenedicarbonyl dichloride, 5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol], block (9CI) (CA INDEX NAME)

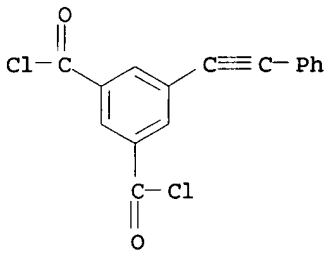
CM 1

CRN 791059-27-3
CMF C19 H16 N2 O6



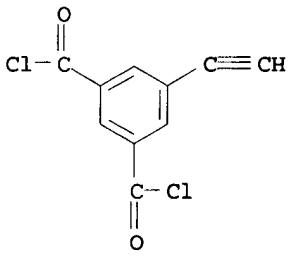
CM 2

CRN 393543-14-1
CMF C16 H8 Cl2 O2



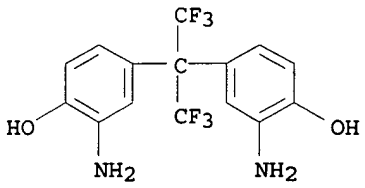
CM 3

CRN 393543-05-0
CMF C10 H4 Cl2 O2



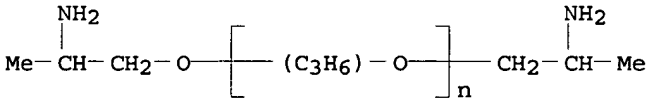
CM 4

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 5

CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



IC ICM C08G073-22
ICS H01L021-312
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
ST polybenzoxazole pyridyl hydroxyaminophenoxybenzoate porous dielec film; semiconductor **device elec** **insulator** fluoropolymer polbenzoxazole porosity
IT **Electric insulators**
Semiconductor devices
(polybenzoxazole porous films with small and uniform pore size for semiconductor device dielec. layers)
IT **864453-33-8P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-3,5-bis(3-hydroxy-4-aminophenoxy)benzoic acid 3-pyridyl ester-5-ethynylisophthaloyl dichloride-5-phenylethynylisophthaloyl dichloride-polypropylene glycol bis(2-aminopropyl) ether block copolymer
864453-34-9P 864453-35-0P 864453-36-1P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole porous films with small and uniform pore size for semiconductor device dielec. layers)

L121 ANSWER 3 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:471270 HCAPLUS
DOCUMENT NUMBER: 143:34880
TITLE: Light-resistant polymer compositions and organic **electroluminescent** **devices** using them
INVENTOR(S): Arai, Nana; Miyoshi, Kazuto; Okuda, Ryoji
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2005139433	A2	20050602	JP 2004-281290	2004 0928
PRIORITY APPLN. INFO.:			JP 2003-354874 A	2003 1015

AB The compns. containing light stabilizers give 0.05-20-μm cured films showing dielec. breakdown voltage ≥150 kV/mm after 500-h radiation of xenon arc light. The **electroluminescent devices** have **elec. insulating** layers of the compns. The compns. are also useful for surface-protective films and interlayer insulating films of semiconductor devices. The devices show high dielec. strength after unavoidable light radiation.

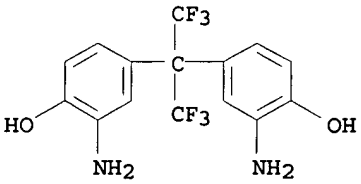
IT **133440-72-9DP**, norbornenedicarboximide-terminated
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

RN 133440-72-9 HCAPLUS

CN Benzoyl chloride, 4,4'-oxybis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

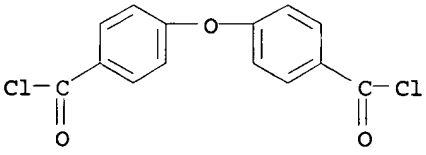
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

CRN 7158-32-9
CMF C14 H8 Cl2 O3



IC ICM C08L101-00
ICS C08G073-10; C08G073-22; C08K005-00; C08L079-04; C08L079-08; C09K011-06; H01L021-312; H05B033-14; H05B033-22

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38, 76

ST light resistance polymer **insulator electroluminescent device**; dielec strength polyimide **insulator electroluminescent device**; polybenzoxazole **insulator** light resistance **electroluminescent device**; novolak **insulator** light resistance **electroluminescent device**; acrylic **insulator** light resistance **electroluminescent device**; polysiloxane **insulator** light resistance **electroluminescent device**

IT Polybenzoxazoles
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorine-containing; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT **Electric insulators**
Electroluminescent devices
Light stabilizers
Light-resistant materials
(light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT Polysiloxanes, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT Phenolic resins, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(novolak; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT Photoimaging materials
(photopolymerizable; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT Fluoropolymers, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT Polysiloxanes, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-polyimide-; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT Polyimides, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES

(Uses)
(polyether-siloxane-; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT Polysiloxanes, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide-, fluorine-containing; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT Fluoropolymers, uses
Polyethers, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide-siloxane-; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT Polyimides, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(siloxane-, fluorine-containing; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT 2440-22-4 41556-26-7, Tinuvin 292 192662-79-6, Tinuvin 400 852995-17-6, Chimassorb 81FL
RL: DEV (Device component use); MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(light stabilizers; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT 25035-81-8P, Methacrylic acid-methyl methacrylate-styrene copolymer 27029-76-1P, m-Cresol-p-cresol-formaldehyde copolymer **133440-72-9DP**, norbornenedicarboximide-terminated 151402-72-1DP, imide-terminated with 3-aminophenol 162816-07-1P 236095-20-8P 809241-11-0P 852954-98-4P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT 223652-10-6P 236095-20-8P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(monomers; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT 110726-28-8D, naphthoquinonediazidosulfonate derivs.
RL: CAT (Catalyst use); USES (Uses)
(photoacid generators; light-resistant polymer compns. with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

IT 122-04-3, 4-Nitrobenzoyl chloride 1204-28-0, Trimellitic anhydride chloride 83558-87-6, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactants in monomer preparation; light-resistant polymer compns.

with high dielec. strength for **elec. insulators** of **electroluminescent devices**)

L121 ANSWER 4 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:160236 HCAPLUS
DOCUMENT NUMBER: 142:241774
TITLE: Positive-working photosensitive resin compositions, relief patterning thereof, and **electronic parts** therewith
INVENTOR(S): Kawasaki, Hiroshi
PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

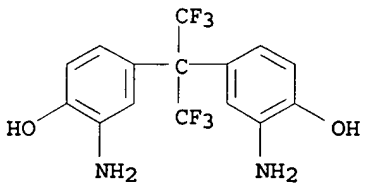
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005049503	A2	20050224	JP 2003-204529	2003 0731

PRIORITY APPLN. INFO.: JP 2003-204529 2003 0731

OTHER SOURCE(S): MARPAT 142:241774
AB The compns. comprise polybenzoxazole precursors [COR1COR2(OH)2NH] [R1 = bivalent organic groups containing (bridged plural) aromatic rings; R2 = tetravalent organic groups containing (bridged plural) aromatic rings], radiation-sensitive acid generators, acid-labile compds., 2-R-4,5-diamino-1,3,5-triazines (R = monovalent organic group), and solvents. Pasting the compns. on supportive substrates, drying, exposing, baking, developing, and post-baking give relief patterns useful for protective layers or interlayer **insulation** films of **electronic devices.**
IT **133440-72-9P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(actual monomers, benzoxazole ring-containing; pos.-working polybenzoxazole precursor compns. for relief insulators with good adhesion to Cu)
RN 133440-72-9 HCAPLUS
CN Benzoyl chloride, 4,4'-oxybis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

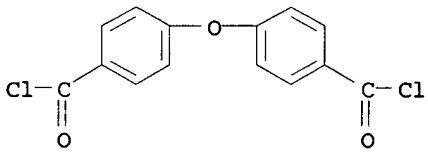
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2

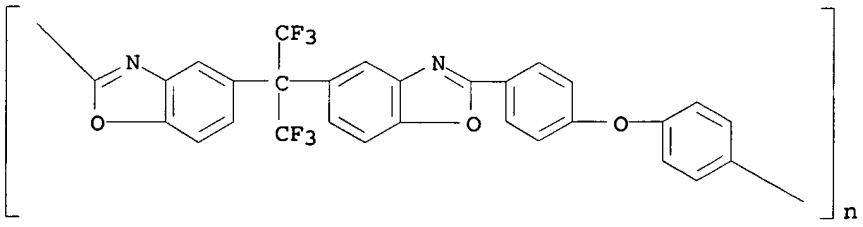


CM 2

CRN 7158-32-9
CMF C14 H8 Cl2 O3



IT **112480-83-8P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(benzoxazole ring-containing; pos.-working polybenzoxazole precursor compns. for relief insulators with good adhesion to Cu)
RN 112480-83-8 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



IC ICM G03F007-037
ICS G03F007-004; H01L021-027
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
IT **Electric insulators**
(interlayer **insulators**; pos.-working polybenzoxazole precursor compns. for relief insulators with good adhesion to Cu)
IT **133440-72-9P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(actual monomers, benzoxazole ring-containing; pos.-working

polybenzoxazole precursor compns. for relief insulators with good adhesion to Cu)

IT **112480-83-8P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(benzoxazole ring-containing; pos.-working polybenzoxazole precursor compns. for relief insulators with good adhesion to Cu)

L121 ANSWER 5 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:847588 HCAPLUS
DOCUMENT NUMBER: 141:332962
TITLE: Crosslinked polyimides, compositions containing them and method for their manufacture
INVENTOR(S): Itatani, Hiroshi
PATENT ASSIGNEE(S): Pi R & D Co. Ltd., Japan
SOURCE: PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004087793	A1	20041014	WO 2004-JP4305	20040326

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:		
JP 2003-90546	A	20030328
JP 2003-112425	A	20030417
JP 2003-412832	A	20031211

AB The crosslinked polyamides are produced by the polycondensation of a tetraamine, a tetracarboxylic acid dianhydride and an aromatic diamine in the presence of a catalyst. The crosslinked polyamides exhibit a dielec. constant of ≤2.7 while compns. containing polyimides have inherent good heat resistance, **elec. insulation** and chemical resistance, and are useful for **elec.** and **electronic device** manufacture

Thus, polycondensing bis(3,5-diaminobenzoyl)-1,4-piperazine with biphenyltetracarboxylic dianhydride and 4,4'-diaminodiphenyl ether using oxalic acid and pyridine 2 component catalyst in N-methyl-2-pyrrolidone then coupling with 3,3',4,4'-diphenyl ether tetracarboxylic dianhydride and 1,3-bis(4-aminophenyl)benzene gave a crosslinked polyimide having the claimed properties.

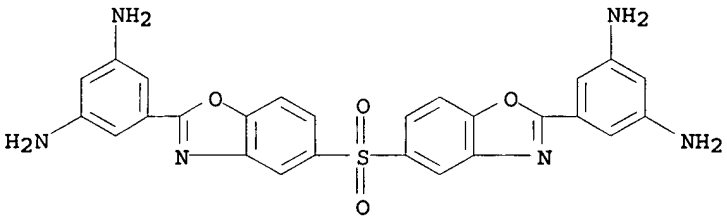
IT **773889-63-7P 773889-64-8P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(crosslinked polyimides with low dielec. constant, compns. containing them and method for their manufacture and use)

RN 773889-63-7 HCAPLUS

CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with 3-(4-aminophenoxy)benzenamine, 5,5'-oxybis[1,3-isobenzofurandione], 4,4'-[1,3-phenylenebis(oxy)]bis[benzenamine] and 5,5'-(sulfonyldi-5,2-benzoxazolediyl)bis[1,3-benzenediamine] (9CI) (CA INDEX NAME)

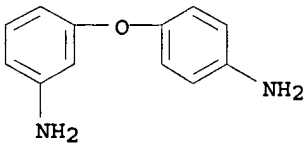
CM 1

CRN 518992-19-3
CMF C26 H20 N6 O4 S



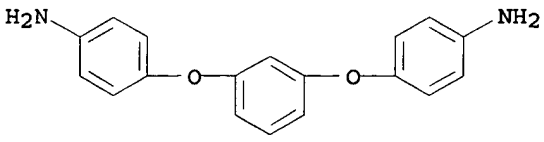
CM 2

CRN 2657-87-6
CMF C12 H12 N2 O



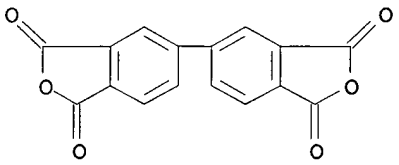
CM 3

CRN 2479-46-1
CMF C18 H16 N2 O2



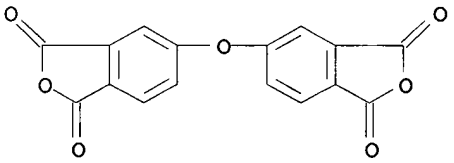
CM 4

CRN 2420-87-3
CMF C16 H6 O6



CM 5

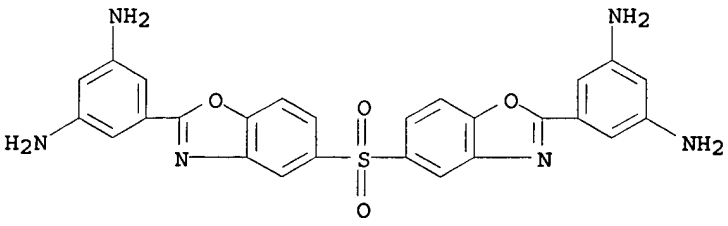
CRN 1823-59-2
CMF C16 H6 O7



RN 773889-64-8 HCAPLUS
CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with 3-(4-aminophenoxy)benzenamine, α-[(3-aminopropyl)dimethylsilyl]-ω-[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)], 5,5'-oxybis[1,3-isobenzofurandione] and 5,5'-(sulfonyldi-5,2-benzoxazolediyl)bis[1,3-benzenediamine] (9CI) (CA INDEX NAME)

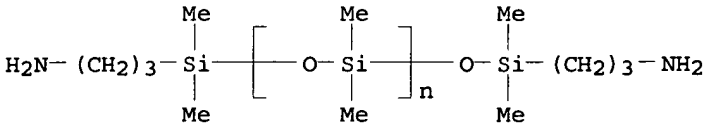
CM 1

CRN 518992-19-3
CMF C26 H20 N6 O4 S



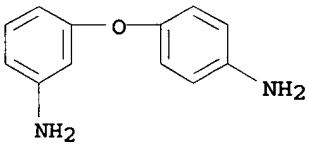
CM 2

CRN 97917-34-5
CMF (C2 H6 O Si)n C10 H28 N2 O Si2
CCI PMS



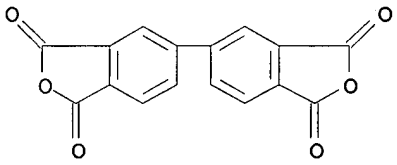
CM 3

CRN 2657-87-6
CMF C12 H12 N2 O



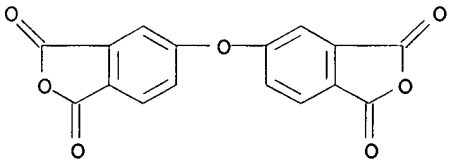
CM 4

CRN 2420-87-3
CMF C16 H6 O6



CM 5

CRN 1823-59-2
CMF C16 H6 O7



IC ICM C08G073-10

ICS G03F007-039; G03F007-037
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 38
IT 773889-56-8P 773889-57-9P 773889-58-0P 773889-62-6P
773889-63-7P 773889-64-8P 773889-65-9P
773889-66-0P 773889-67-1P 773889-68-2P 773889-69-3P
773889-70-6P 773889-71-7P 773889-72-8P 773889-73-9P
773889-74-0P 773889-75-1P 773889-76-2P 773889-77-3P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(crosslinked polyimides with low dielec. constant, compns. containing them and method for their manufacture and use)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L121 ANSWER 6 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:779235 HCAPLUS
DOCUMENT NUMBER: 141:287767
TITLE: Heat-resistant photosensitive resin compositions, their patterning, and **electronic devices** with the patterns
INVENTOR(S): Komatsu, Hiroshi; Nakano, Hajime; Fujieda, Nagatoshi
PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004264537	A2	20040924	JP 2003-54299	2003 0228
WO 2005101125	A1	20051027	WO 2004-JP4666	2004 0331

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: JP 2003-54299 A 2003 0228

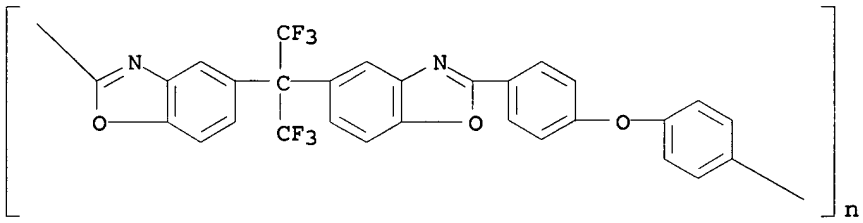
AB The compns. comprise (A) (heat-resistant) polymers bearing acidic functional groups and/or their derivs., (B) compds. bearing A-reactive amino groups, (C) photosensitive compds., and (D)

solvents. The polymers may be polyimides and/or polybenzoxazoles. The compns. are pasted, patternwise exposed, alkali developed, and then post-baked to form protective or interlayer insulating patterns.

IT **112480-83-8P 251650-67-6P**, 2,2-Bis(3-amino-4-hydroxyphenyl)-1,1,1,3,3,3-hexafluoropropane-bis(3,4-dicarboxyphenyl)ether butyl ester dichloride copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(benzoxazole ring-containing; photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)

RN 112480-83-8 HCAPLUS

CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)

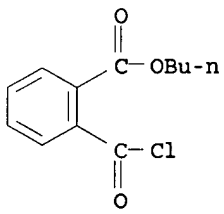


RN 251650-67-6 HCAPLUS

CN Benzoic acid, 3,3'(or 4,4')-oxybis[2-(chlorocarbonyl)-, dibutyl ester, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

CM 1

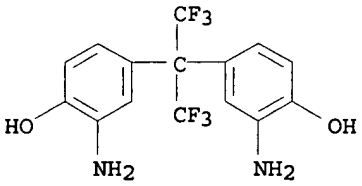
CRN 251650-61-0
CMF C24 H24 Cl2 O7
CCI IDS



1/2 (D1—O—D1)

CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



IC ICM G03F007-004
ICS C08G073-06; G03F007-027; G03F007-037; H01L021-027
CC 76-14 (Electric Phenomena)
Section cross-reference(s): 38, 74
IT Heat-resistant materials
(dielec., films; photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)
IT **Electric insulators**
(heat-resistant, films; photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)
IT **Electric apparatus**
Photoimaging materials
(photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)
IT Polybenzoxazoles
Polyimides, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)
IT Polyethers, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-, fluorine-containing; photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)
IT Fluoropolymers, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-polyether-; photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)
IT Polybenzoxazoles
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-, fluorine-containing; photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)
IT 26298-81-7P, 3,3',4,4'-Biphenyltetracarboxylic dianhydride-4,4'-oxydianiline copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(actual monomers; photosensitive resin compns. forming heat-resistant patterns as protective films or

insulators of **electronic devices**)

IT 112492-60-1P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(benzoxazole ring-containing, actual monomers; photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)

IT **112480-83-8P 251650-67-6P**, 2,2-Bis(3-amino-4-hydroxyphenyl)-1,1,1,3,3,3-hexafluoropropane-bis(3,4-dicarboxyphenyl)ether butyl ester dichloride copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(benzoxazole ring-containing; photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)

IT 75-36-5DP, Acetyl chloride, reaction products with aminobenzoic acid 98-09-9DP, Benzenesulfonyl chloride, reaction products with methylaminoterephthalate 150-13-0DP, 4-Aminobenzoic acid, reaction products with acetyl chloride 535-87-5DP, 3,5-Diaminobenzoic acid, reaction products with phenylchloroformate 1885-14-9DP, Phenylchloroformate, reaction products with diaminobenzoic acid 3282-30-2DP, Pivaloyl chloride, reaction products with amino compds. 19009-39-3DP, Diisopropylcarbamyl chloride, reaction products with hexafluoroisopropylidenebis(phenoxyaniline) 60728-41-8DP, reaction products with benzenesulfonyl chloride 69563-88-8DP, reaction products with diisopropylcarbamyl chloride 83558-87-6DP, reaction products with pivaloyl chloride
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(chain extenders; photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)

IT 757967-63-8P, 3,3',4,4'-Biphenyltetracarboxylic dianhydride-1,3-bis(3-aminopropyl)tetramethyldisiloxane-m-phenylenediamine copolymer ester with 2-hydroxyethyl methacrylate
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)

IT 26615-45-2P, 3,3',4,4'-Biphenyltetracarboxylic dianhydride-4,4'-oxydianiline copolymer, sru
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)

IT 17831-71-9, Tetraethylene glycol diacrylate
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)

IT 603-44-1DP, Tris(4-hydroxyphenyl)methane, reaction products with naphthoquinonediazidesulfonyl chloride 36451-09-9DP, Naphthoquinone-1,2-diazide-4-sulfonyl chloride, reaction products with tris(hydroxyphenyl)methane
RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES

(Uses)
(photosensitizers; photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)

IT 90-94-8, Michler's ketone 1707-68-2, 2,2'-Bis(o-chlorophenyl)-4,4',5,5'-tetraphenylbiimidazole 2382-96-9, 2-Mercaptobenzoxazole 121172-98-3, p-Nitrobenzyl-9,10-dimethoxyanthracene-2-sulfonate
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)
(photosensitizers; photosensitive resin compns. forming heat-resistant patterns as protective films or **insulators** of **electronic devices**)

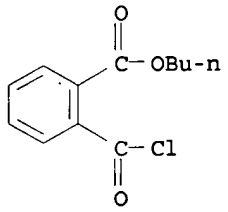
L121 ANSWER 7 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:550097 HCAPLUS
DOCUMENT NUMBER: 141:96671
TITLE: Heat-stable photosensitive polymer compositions, their patterning, and **electronic devices** manufactured therewith
INVENTOR(S): Yamazaki, Noriyuki
PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004191403	A2	20040708	JP 2002-355584	2002 1206
PRIORITY APPLN. INFO.:			JP 2002-355584	2002 1206

OTHER SOURCE(S): MARPAT 141:96671
AB The compns., showing strong adhesion to substrates and high sensitivity to i line, comprise alkali-developable polyimides or their precursors, photoacid generators, compds. having OH on aromatic ring-bound C, and silane compds. HS(CH2)nSi(OR1)3-pR2p (n = 1-10 integer; R1, R2 = C1-5 alkyl; p = 0-3 integer). **Electronic devices** having relief patterns obtained from the compns. as surface protective films and interlayer insulator films are also claimed.
IT **435345-98-5P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-stable photosensitive polyamic acid compns. containing silane coupling agents and showing high i-line sensitivity)
RN 435345-98-5 HCAPLUS
CN Benzenedicarboxylic acid, bis(chlorocarbonyl)-, dimethyl ester, polymer with dibutyl 3,3'(or 4,4')-oxybis[6-(chlorocarbonyl)benzoate] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

CM 1

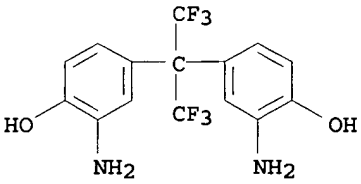
CRN 251650-61-0
CMF C24 H24 Cl2 O7
CCI IDS



1/2 (D1—O—D1)

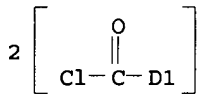
CM 2

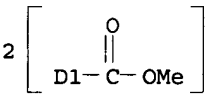
CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 3

CRN 54019-46-4
CMF C12 H8 Cl2 O6
CCI IDS





IC ICM G03F007-037
ICS G03F007-004; G03F007-075; H01L021-027
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76
IT **Electric insulators**
(heat-resistant, films; heat-stable photosensitive polyamic acid compns. containing silane coupling agents and showing high i-line sensitivity)
IT **Electric apparatus**
Photoimaging materials
(heat-stable photosensitive polyamic acid compns. containing silane coupling agents and showing high i-line sensitivity)
IT 9043-05-4P, 4,4'-Diaminodiphenyl ether-pyromellitic dianhydride copolymer, sru 25735-00-6P, 4,4'-Diaminodiphenyl ether-3,3',4,4'-diphenyl ether tetracarboxylic dianhydride copolymer, polyimide SRU **435345-98-5P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-stable photosensitive polyamic acid compns. containing silane coupling agents and showing high i-line sensitivity)

L121 ANSWER 8 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:354444 HCAPLUS
DOCUMENT NUMBER: 140:365668
TITLE: Negative-working photoresist composition and its application to form **electronic part** and **insulator** layer in organic electroluminescent display
INVENTOR(S): Suwa, Atsushi; Tomikawa, Masao
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004133435	A2	20040430	JP 2003-319334	

PRIORITY APPLN. INFO.: JP 2002-270137 A 2003 0911
2002 0917

AB The title neg.-working photoresist composition comprises (a) a polymer having a structural repeating unit of -[CO-R1(OR4)p(COOR3)m-CONH-R2(OR5)q-NH]n- {R1 = 2- to 8-valent C≥2-organic group; R2 = 2- to 6-valent C≥2-organic group; R3 = H, C1-20-organic group; n = 10-100,000; m = 0-2; p, q = 0-4; R4, R5 = H, photocrosslinking group}, (b) a phenolic low mol. weight compound, (c) a polymerizable low mol. weight compound, and (d) a photopolymn. initiator.

IT **680227-88-7P 682750-64-7P**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide precursor in neg.-working photoresist composition)

RN 680227-88-7 HCAPLUS

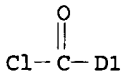
CN Benzoic acid, oxybis[(chlorocarbonyl)-, polymer with 1,3-benzenedicarbonyl dichloride, (methoxymethyl)oxirane and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

CM 1

CRN 290294-07-4
CMF C16 H8 Cl2 O7
CCI IDS

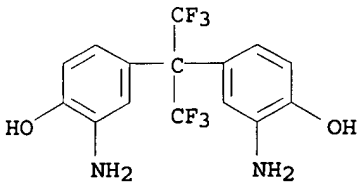
D1—CO_2H

1/2 (D1—O—D1)



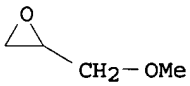
CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



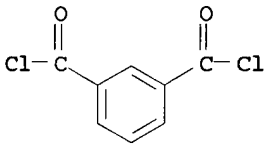
CM 3

CRN 930-37-0
CMF C4 H8 O2



CM 4

CRN 99-63-8
CMF C8 H4 Cl2 O2



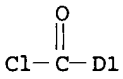
RN 682750-64-7 HCAPLUS
CN Benzoic acid, oxybis[(chlorocarbonyl)-, polymer with 1,3-benzenedicarbonyl dichloride, 2-isocyanatoethyl 2-methyl-2-propenoate, (methoxymethyl)oxirane and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

CM 1

CRN 290294-07-4
CMF C16 H8 Cl2 O7
CCI IDS

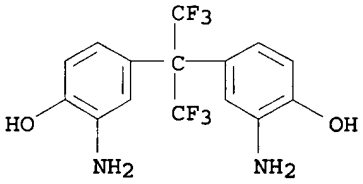
D1— CO_2H

1/2 (D1— O— D1)



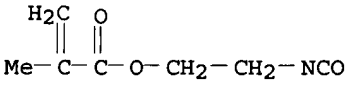
CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



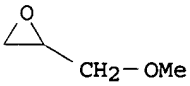
CM 3

CRN 30674-80-7
CMF C7 H9 N O3



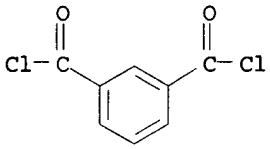
CM 4

CRN 930-37-0
CMF C4 H8 O2



CM 5

CRN 99-63-8
CMF C8 H4 Cl2 O2



IC ICM G03F007-027
ICS C08G073-10; G03F007-004; H01L021-027; H05B033-12; H05B033-14; H05B033-22
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76
ST neg working photoresist compn **electronic part** **insulator electroluminescent** display
IT **Electroluminescent devices**
(displays; neg.-working photoresist composition and its application to form **electronic part** and **insulator** layer in organic electroluminescent display)
IT Luminescent screens
(electroluminescent; neg.-working photoresist composition and its application to form **electronic part** and **insulator** layer in organic electroluminescent display)
IT Dielectric films
Electronic device fabrication
Negative photoresists
(neg.-working photoresist composition and its application to form **electronic part** and **insulator** layer in organic electroluminescent display)
IT Photoimaging materials
(photopolymerizable; neg.-working photoresist composition and its application to form **electronic part** and **insulator** layer in organic electroluminescent display)
IT 236095-20-8P 264604-36-6P 317822-55-2P **680227-88-7P**
682750-60-3P 682750-62-5P **682750-64-7P**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide precursor in neg.-working photoresist composition)

L121 ANSWER 9 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:305598 HCAPLUS
DOCUMENT NUMBER: 140:322525
TITLE: Polyamide dielectric compositions, their coating varnishes, their porous **electric insulator** films with good elasticity and heat and water resistance, and semiconductor devices having them
INVENTOR(S): Ono, Koji
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 32 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004119080	A2	20040415	JP 2002-278044	20020924
PRIORITY APPLN. INFO.:			JP 2002-278044	20020924

AB The compns. contain polymers that are manufactured from (A) polyamides [NHX(OH)2NHCOYCO]m[NHX(OH)2NHCOZCO]n[NHX(OH)2NHCOC6H5-a[CONHX(OH)2NH]a-1C.tplbond.CC6H5-b(CO)b]c [X = tetravalent group selected from benzenetetrayl, biphenyltetrayl, etc.; Y = divalent group selected from (alkyl)ethynylphenylene, (alkyl)ethynylbiphenylene, (alkyl)ethynylnaphthylene, (alkyl)ethynylsulfonylbiphenylene diphenyleneacetylene, etc.; Z = phenylene, naphthylene, biphenylene, cyclohexylene, etc.; a = 2-5; b = 1-5, c = 1-100; m >0; n ≥0; m + n = 2-1000; m/(m + n) = 0.05-1] prepared from bisaminophenols and carboxylic acids containing polybasic carboxylic acids (HOCO)aC6H5-aC.tplbond.CC6H5-b(CO2H)b (a, b = same as above) and (B) reactive oligomers having functional groups reactive with carboxy, amino, or OH in the polyamides. Thus, 2,2-bis(3-amino-4-hydroxyphenyl)hexafluoropropane-5-ethynylisophthaloyl dichloride-isophthaloyl dichloride-5-phenylethynylisophthaloyl dichloride-3,5,4'-tolanetricarboxylic acid trichloride copolymer was reacted with polypropylene glycol bis(2-aminopropyl) ether, coated on a Si wafer, and heated at 300° then at 400° for decomposing polypropylene units to give a porous polybenzoxazole film showing Tg >450°, moisture absorption 0.2%, elastic modulus 3.0 GPa, and relative dielec. constant 1.81.

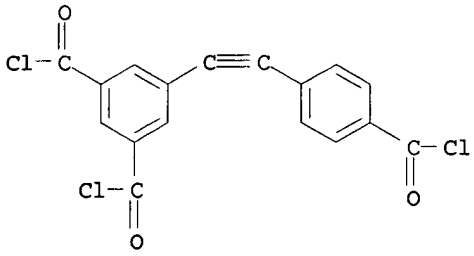
IT **677716-71-1P 677716-73-3P 677716-75-5P 677716-76-6P 677716-77-7DP**, reaction products with aminobenzoate-terminated polystyrene **677716-78-8P 677716-79-9P**
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

RN 677716-71-1 HCAPLUS

CN 1,3-Benzenedicarbonyl dichloride, 5-[[4-(chlorocarbonyl)phenyl]ethynyl]-, polymer with α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)poly[oxy(methyl-1,2-ethanediyl)], 1,3-benzenedicarbonyl dichloride, 5-ethynyl-1,3-benzenedicarbonyl dichloride, 5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

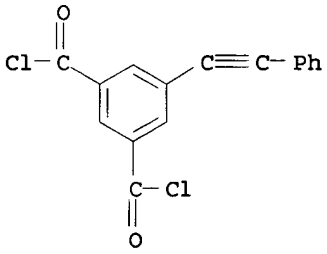
CM 1

CRN 677716-70-0
CMF C17 H7 Cl3 O3



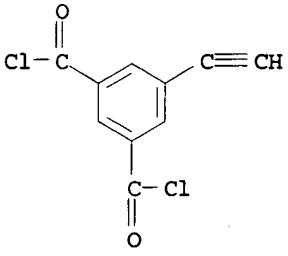
CM 2

CRN 393543-14-1
CMF C16 H8 Cl2 O2



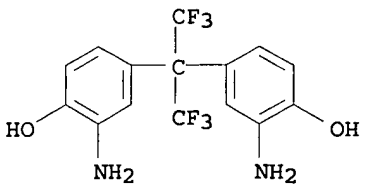
CM 3

CRN 393543-05-0
CMF C10 H4 Cl2 O2



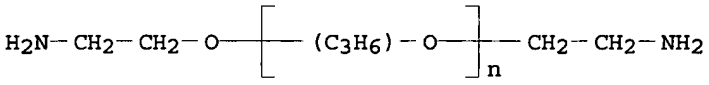
CM 4

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 5

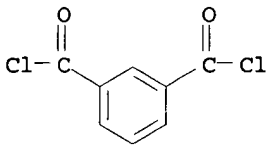
CRN 9046-10-0
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



2 (D1—Me)

CM 6

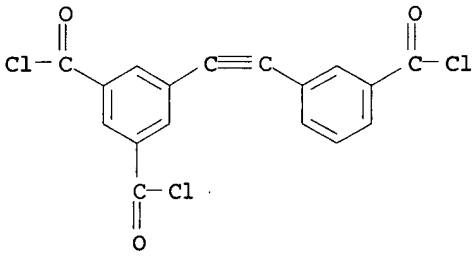
CRN 99-63-8
CMF C8 H4 Cl2 O2



RN 677716-73-3 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-[[3-(chlorocarbonyl)phenyl]ethynyl]-, polymer with α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)poly[oxy(methyl-1,2-ethanediyl)], 1,3-benzenedicarbonyl dichloride, 5-ethynyl-1,3-benzenedicarbonyl dichloride, 5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

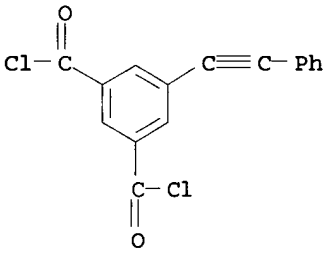
CM 1

CRN 677716-72-2
CMF C17 H7 Cl3 O3



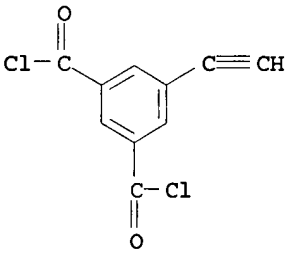
CM 2

CRN 393543-14-1
CMF C16 H8 Cl2 O2



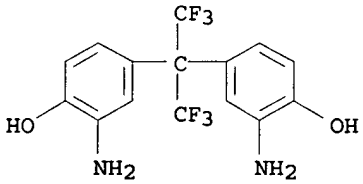
CM 3

CRN 393543-05-0
CMF C10 H4 Cl2 O2



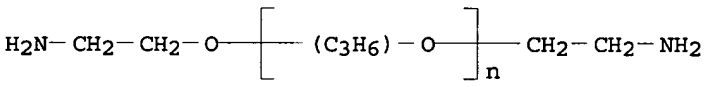
CM 4

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 5

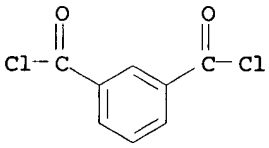
CRN 9046-10-0
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



2 (D1—Me)

CM 6

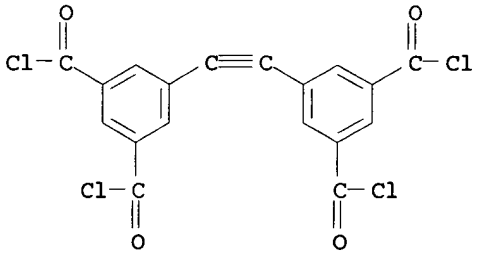
CRN 99-63-8
CMF C8 H4 Cl2 O2



RN 677716-75-5 HCAPLUS
CN 2,7-Biphenylenedicarbonyl dichloride, polymer with α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)poly[oxy(methyl-1,2-ethanediyl)], 3,3'-diamino[1,1'-biphenyl]-4,4'-diol and 5,5'-(1,2-ethynediyl)bis[1,3-benzenedicarbonyl dichloride] (9CI) (CA INDEX NAME)

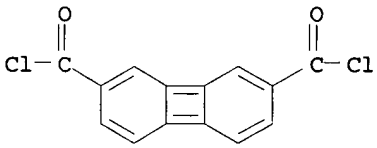
CM 1

CRN 677716-74-4
CMF C18 H6 Cl4 O4



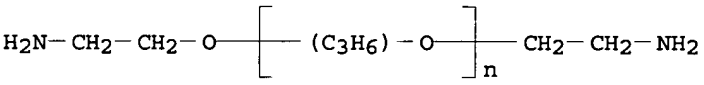
CM 2

CRN 69417-81-8
CMF C14 H6 Cl2 O2



CM 3

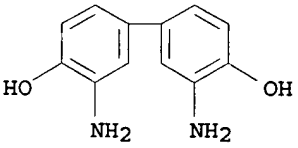
CRN 9046-10-0
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



2 (D1—Me)

CM 4

CRN 4194-40-5
CMF C12 H12 N2 O2

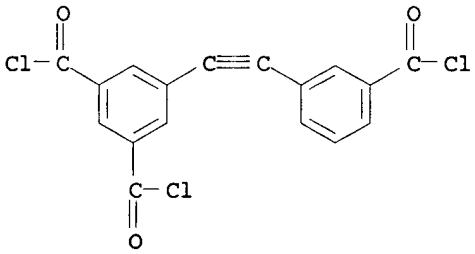


RN 677716-76-6 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-[[3-

(chlorocarbonyl)phenyl]ethynyl]-, polymer with α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)poly[oxy(methyl-1,2-ethanediyl)], 3,3'-diamino[1,1'-biphenyl]-4,4'-diol and 4,4'-(1,2-ethynediyl)bis[benzoyl chloride] (9CI) (CA INDEX NAME)

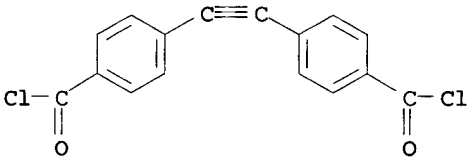
CM 1

CRN 677716-72-2
CMF C17 H7 Cl3 O3



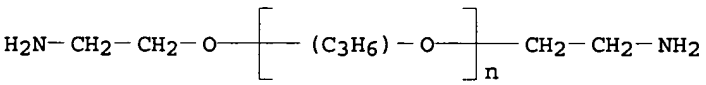
CM 2

CRN 16819-44-6
CMF C16 H8 Cl2 O2



CM 3

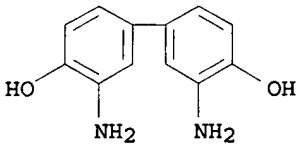
CRN 9046-10-0
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



2 (D1—Me)

CM 4

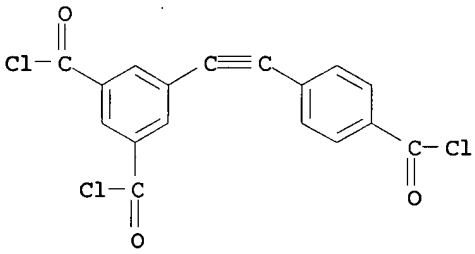
CRN 4194-40-5
CMF C12 H12 N2 O2



RN 677716-77-7 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-[[4-(chlorocarbonyl)phenyl]ethynyl]-, polymer with 1,3-benzenedicarbonyl dichloride, 5-ethynyl-1,3-benzenedicarbonyl dichloride, 5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

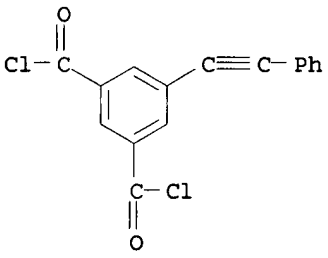
CM 1

CRN 677716-70-0
CMF C17 H7 Cl3 O3



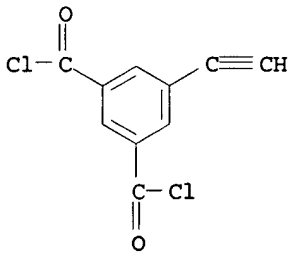
CM 2

CRN 393543-14-1
CMF C16 H8 Cl2 O2



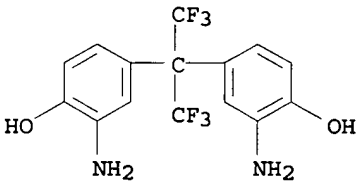
CM 3

CRN 393543-05-0
CMF C10 H4 Cl2 O2



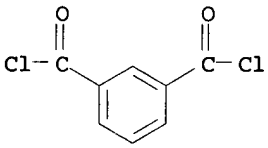
CM 4

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 5

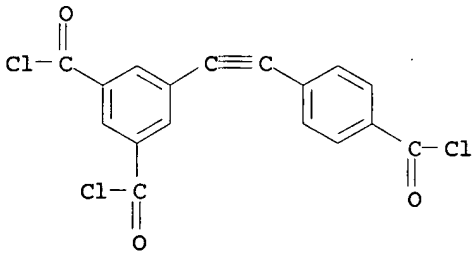
CRN 99-63-8
CMF C8 H4 Cl2 O2



RN 677716-78-8 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-[[4-(chlorocarbonyl)phenyl]ethynyl]-, polymer with 1,3-benzenedicarbonyl dichloride, 5-ethynyl-1,3-benzenedicarbonyl dichloride, methyl 2-methyl-2-propenoate, 5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

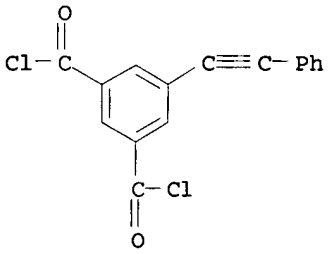
CM 1

CRN 677716-70-0
CMF C17 H7 Cl3 O3



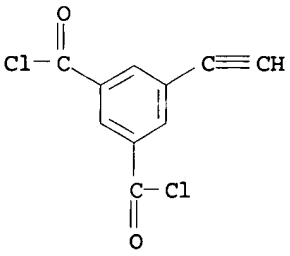
CM 2

CRN 393543-14-1
CMF C16 H8 Cl2 O2



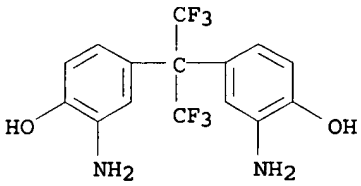
CM 3

CRN 393543-05-0
CMF C10 H4 Cl2 O2



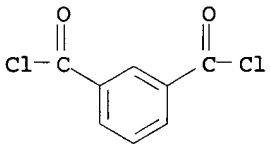
CM 4

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



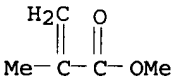
CM 5

CRN 99-63-8
CMF C8 H4 Cl2 O2



CM 6

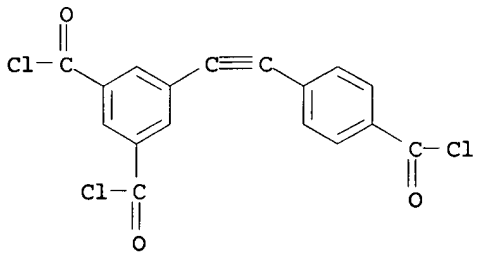
CRN 80-62-6
CMF C5 H8 O2



RN 677716-79-9 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-[[4-(chlorocarbonyl)phenyl]ethynyl]-, polymer with 1,3-benzenedicarbonyl dichloride, 5-ethynyl-1,3-benzenedicarbonyl dichloride, (1-methylethenyl)benzene, 5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

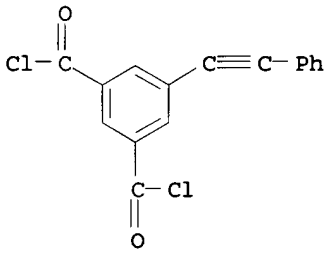
CM 1

CRN 677716-70-0
CMF C17 H7 Cl3 O3



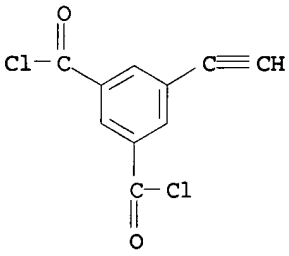
CM 2

CRN 393543-14-1
CMF C16 H8 Cl2 O2



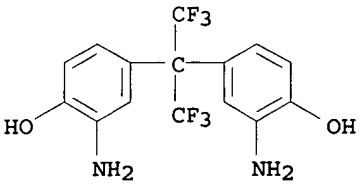
CM 3

CRN 393543-05-0
CMF C10 H4 Cl2 O2



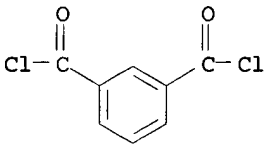
CM 4

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



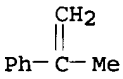
CM 5

CRN 99-63-8
CMF C8 H4 Cl2 O2



CM 6

CRN 98-83-9
CMF C9 H10



IC ICM H01B003-30
ICS C08G073-22; H01L021-312; H01L021-768
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
ST hydroxy polyamide polyacetylene porous dielec film; semiconductor **device elec insulator** polybenzoxazole porosity; polyoxyalkylene polybenzoxazole polyacetylene decompn porous dielec
IT Porous materials
(films; polyacetylene-polybenzoxazole-based porous **elec**. **insulator** films with good elasticity and heat and water resistance for semiconductor devices)
IT Polyamides, processes
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(polyacetylene-, fluorine-containing, OH-containing; polyacetylene-polybenzoxazole-based porous **elec.** **insulator** films with good elasticity and heat and water resistance for semiconductor devices)
IT Polybenzoxazoles
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(polyacetylene-, fluorine-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Fluoropolymers, processes
Polyoxyalkylenes, processes
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(polyacetylene-polyamide-, OH-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyoxyalkylenes, processes
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(polyacetylene-polyamide-, fluorine-containing, OH-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Fluoropolymers, processes
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(polyacetylene-polyamide-polyoxyalkylene-, OH-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyoxyalkylenes, uses
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyacetylene-polybenzoxazole-, fluorine-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Fluoropolymers, uses
Polyoxyalkylenes, uses
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyacetylene-polybenzoxazole-; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT **Electric insulators**
Semiconductor devices
(polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Fluoropolymers, uses
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyacetylene-polybenzoxazole-polyoxyalkylene-; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyamides, processes
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(polyacetylene-polyoxyalkylene-, OH-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyamides, processes
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(polyacetylene-polyoxyalkylene-, fluorine-containing, OH-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polybenzoxazoles
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyacetylene-polyoxyalkylene-, fluorine-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polybenzoxazoles
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyacetylene-polyoxyalkylene-; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyacetylenes, processes
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(polyamide-, fluorine-containing, OH-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyacetylenes, processes
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(polyamide-polyoxyalkylene-, OH-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyacetylenes, processes
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(polyamide-polyoxyalkylene-, fluorine-containing, OH-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyacetylenes, uses
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP

(Preparation); PROC (Process); USES (Uses)
(polybenzoxazole-, fluorine-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyacetylenes, uses
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polybenzoxazole-polyoxyalkylene-, fluorine-containing; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyacetylenes, uses
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polybenzoxazole-polyoxyalkylene-; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyethers, uses
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyester-, reaction products with OH-containing polyamides; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyesters, uses
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyether-, reaction products with OH-containing polyamides; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Films
(porous; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT Polyesters, uses
Polyurethanes, uses
RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(reaction products with OH-containing polyamides; polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

IT 9003-53-6DP, Polystyrene, aminobenzoate-terminated, reaction products with OH-containing polyamides 25248-42-4DP, Polycaprolactone, sru, polyols, reaction products with OH-containing polyamides **677716-71-1P 677716-73-3P 677716-75-5P 677716-76-6P 677716-77-7DP**, reaction products with aminobenzoate-terminated polystyrene **677716-78-8P 677716-79-9P**

RL: CPS (Chemical process); DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyacetylene-polybenzoxazole-based porous **elec. insulator** films with good elasticity and heat and water resistance for semiconductor devices)

L121 ANSWER 10 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:251776 HCAPLUS
DOCUMENT NUMBER: 140:294462
TITLE: **Electric insulating** film for semiconductor element in semiconductor devices
INVENTOR(S): Hirata, Akihiro
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004095863	A2	20040325	JP 2002-255114	20020830

PRIORITY APPLN. INFO.: JP 2002-255114 20020830

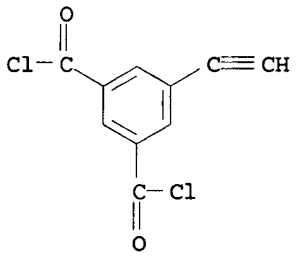
AB The title film is made of **elec. insulative** materials on a silicone wafer and has 0.1-30 % shrinkage in the thickness direction after heat cured at 340-420° C for one hour and following heat treatment at 340-420° C for 10-15 h. The insulating film shows the good contact with a substrate and low specific inductive capacity.

IT **675836-29-0P**, 2,2-Bis(3-amino-4-hydroxyphenyl)propane-5-Ethynylisophthaloyl dichloride-Polypropylene glycol bis(2-aminopropyl ether) copolymer **675836-30-3P**, 3,3'-Diamino-4,4'-dihydroxybiphenyl-5-Ethynylisophthaloyl dichloride-Polypropylene glycol bis(2-aminopropyl ether) copolymer **675836-32-5P**
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(**elec. insulating** film for semiconductor element in semiconductor devices)

RN 675836-29-0 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-ethynyl-, polymer with α-(2-aminopropyl)-ω-(2-aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)] and 4,4'-(1-methylethylidene)bis[2-aminophenol], block (9CI) (CA INDEX NAME)

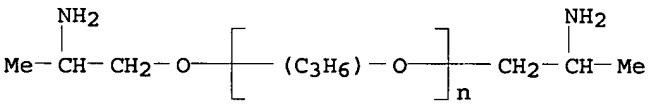
CM 1

CRN 393543-05-0
CMF C10 H4 Cl2 O2



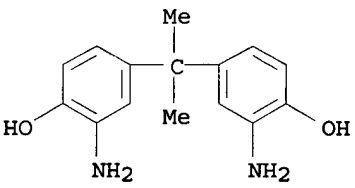
CM 2

CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



CM 3

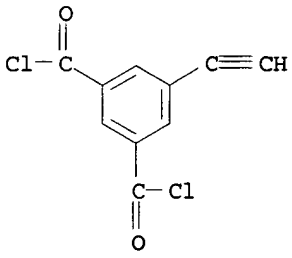
CRN 1220-78-6
CMF C15 H18 N2 O2



RN 675836-30-3 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-ethynyl-, polymer with α-(2-aminopropyl)-ω-(2-aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)] and 3,3'-diamino[1,1'-biphenyl]-4,4'-diol (9CI) (CA INDEX NAME)

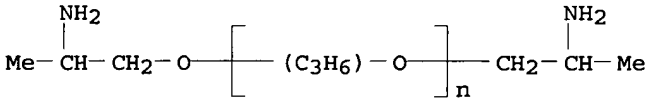
CM 1

CRN 393543-05-0
CMF C10 H4 Cl2 O2



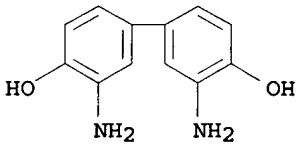
CM 2

CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



CM 3

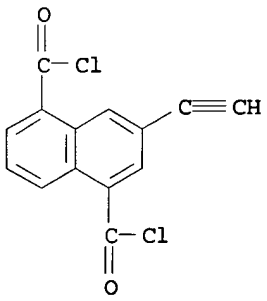
CRN 4194-40-5
CMF C12 H12 N2 O2



RN 675836-32-5 HCAPLUS
CN 1,5-Naphthalenedicarbonyl dichloride, 3-ethynyl-, polymer with α-(2-aminopropyl)-ω-(2-aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)] and 4,4'-(1-methylethylidene)bis[2-aminophenol] (9CI) (CA INDEX NAME)

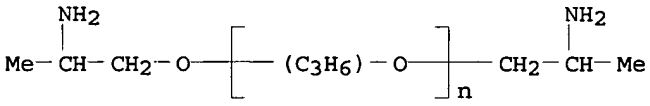
CM 1

CRN 675836-31-4
CMF C14 H6 Cl2 O2



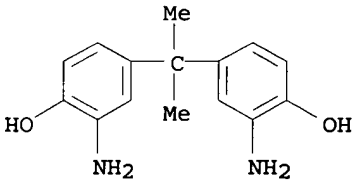
CM 2

CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



CM 3

CRN 1220-78-6
CMF C15 H18 N2 O2



IC ICM H01L021-312
ICS C08G073-22; H01L021-768
CC 73-3 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
ST **elec insulating** film semiconductor device
IT Dielectric films
Semiconductor **device** fabrication
Semiconductor **devices**
(**elec. insulating** film for semiconductor element in semiconductor devices)
IT Polymers, uses
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(heat curable; **elec. insulating** film for semiconductor element in semiconductor devices)
IT **675836-29-0P**, 2,2-Bis(3-amino-4-hydroxyphenyl)propane-5-Ethynylisophthaloyl dichloride-Polypropylene glycol

bis(2-aminopropyl ether) copolymer **675836-30-3P**, 3,3'-Diamino-4,4'-dihydroxybiphenyl-5-Ethynylisophthaloyl dichloride-Polypropylene glycol bis(2-aminopropyl ether) copolymer **675836-32-5P**
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(**elec. insulating** film for semiconductor element in semiconductor devices)

L121 ANSWER 11 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:219168 HCAPLUS
DOCUMENT NUMBER: 140:278413
TITLE: Positive photoimaging precursor compositions with high resolution and sensitivity, and semiconductor **electric components** and organic **electroluminescence devices** using them
INVENTOR(S): Suwa, Atsushi; Fujita, Yoji; Tomikawa, Masao
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004085622	A2	20040318	JP 2002-242586	20020822
PRIORITY APPLN. INFO.:			JP 2002-242586	20020822

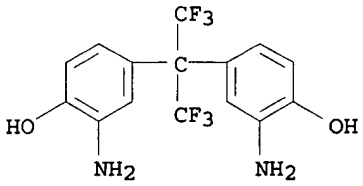
AB The compns. comprise (A) alkali-soluble heat-resistant resin precursors (e.g. polyamic acids), (B) heat-polymerizable compds. having phenolic OH and ethylenically unsatd. groups (CH2)aCR3:CR1R2 (R1-3 = H, C1-20-alkyl, phenoxy; a = 0-5) and/or those having acetylenically unsatd. groups (CH2)aC.tplbond.CR1 (R1, a = same as above), and (C) quinonediazide esters.

IT **281653-60-9P**
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. photoimaging polyamic acid compns. with high resolution and sensitivity for semiconductor devices and organic EL displays)

RN 281653-60-9 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, polymer with oxybis[benzoyl chloride] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

CM 1

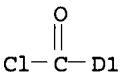
CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

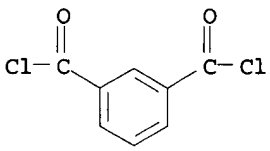
CRN 50975-64-9
CMF C14 H8 Cl2 O3
CCI IDS

1/2 (D1—O—D1)



CM 3

CRN 99-63-8
CMF C8 H4 Cl2 O2



IC ICM G03F007-037
ICS C08F012-34; C08F038-00; C08G069-26; G03F007-025; G03F007-027; G03F007-40; H01L021-027
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76
ST pos photoimaging compn polyamic acid sensitivity; org **electroluminescence device** polyimide pos photoimaging; semiconductor device acetylenyl ethenyl photoimaging insulator
IT **Electroluminescent devices**
(displays; pos. photoimaging polyamic acid compns. with high resolution and sensitivity for semiconductor devices and organic EL

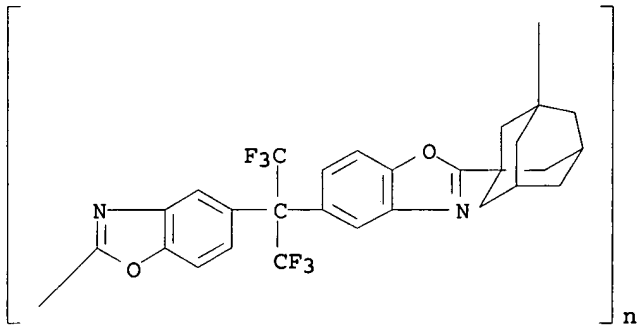
displays)
IT **Electric insulators**
Photoimaging materials
Semiconductor devices
(pos. photoimaging polyamic acid compns. with high resolution and sensitivity for semiconductor devices and organic EL displays)
IT 108-31-6DP, Maleic anhydride, reaction products with polyamic acids 151402-72-1DP, aminophenol-terminated **281653-60-9P** 433264-94-9DP, maleic anhydride-terminated
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. photoimaging polyamic acid compns. with high resolution and sensitivity for semiconductor devices and organic EL displays)

L121 ANSWER 12 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:55633 HCAPLUS
DOCUMENT NUMBER: 140:103419
TITLE: Polybenzoxazole precursors, photoimaging compositions containing them with good i-line transmission, heat-resistant polybenzoxazole dielectric, and **electric parts** using them
INVENTOR(S): Sasaki, Akihiro; Nomura, Yutaka
PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

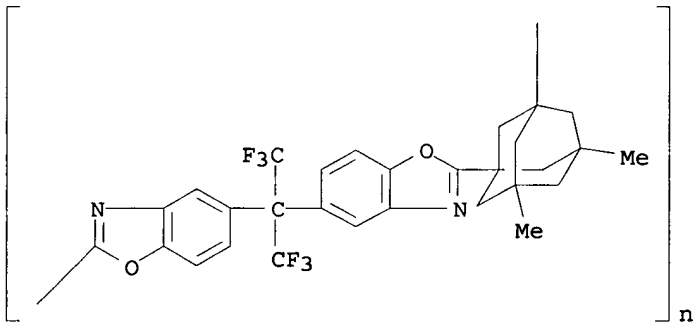
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004018593	A2	20040122	JP 2002-172884	2002 0613

PRIORITY APPLN. INFO.: JP 2002-172884 2002 0613

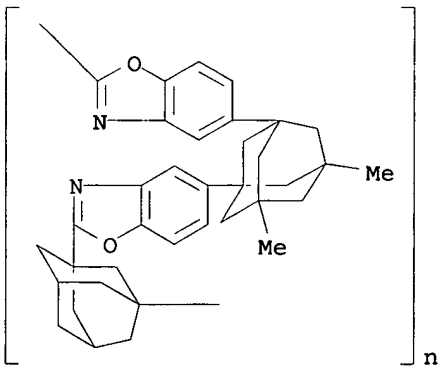
AB The invention relates to polybenzoxazole precursors having a repeating unit COXCONHY(OH)2NH (X = divalent organic group; Y = tetravalent organic group; X and/or Y having adamantane structure in a main chain). The **elec. parts** have the polybenzoxazole layers as a surface protective films or interlayer insulators.
IT **645403-31-2P 645403-33-4P 645403-35-6P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(photoimaging compns. having adamantane-containing polybenzoxazole precursors with good i-line transmission for heat-resistant interlayer dielec.)
RN 645403-31-2 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyltricyclo[3.3.1.13,7]decane-1,3-diyl] (9CI) (CA INDEX NAME)



RN 645403-33-4 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl(5,7-dimethyltricyclo[3.3.1.13,7]decane-1,3-diyl)] (9CI) (CA INDEX NAME)



RN 645403-35-6 HCAPLUS
CN Poly[2,5-benzoxazolediyl(5,7-dimethyltricyclo[3.3.1.13,7]decane-1,3-diyl)-5,2-benzoxazolediyltricyclo[3.3.1.13,7]decane-1,3-diyl] (9CI) (CA INDEX NAME)



IC ICM C08G073-22
ICS C08J005-18; G03F007-004; G03F007-037; H01B003-30;

H01L021-027; H01L021-312; H01L021-768; C08L079-04
CC 76-10 (Electric Phenomena)
Section cross-reference(s): 38, 74
ST polybenzoxazole precursor adamantane photoimaging interlayer insulator; **elec part** polybenzoxazole i line transmission
IT **Electric apparatus**
Electric insulators
Photoimaging materials
(photoimaging compns. having adamantane-containing polybenzoxazole precursors with good i-line transmission for heat-resistant interlayer dielec.)
IT **645403-31-2P 645403-33-4P 645403-35-6P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(photoimaging compns. having adamantane-containing polybenzoxazole precursors with good i-line transmission for heat-resistant interlayer dielec.)

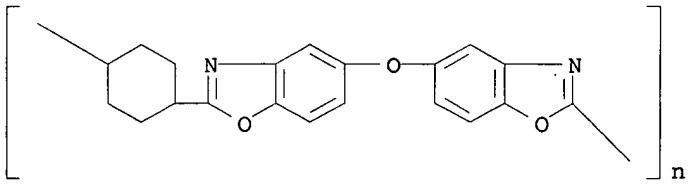
L121 ANSWER 13 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:52870 HCAPLUS
DOCUMENT NUMBER: 140:103416
TITLE: Polybenzoxazole precursors with good i-line transmission, photoimaging compositions, polybenzoxazoles with good heat resistance and elongation, and their **electric parts**
INVENTOR(S): Nomura, Yutaka; Sasaki, Akihiro
PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004018594	A2	20040122	JP 2002-172885	20020613

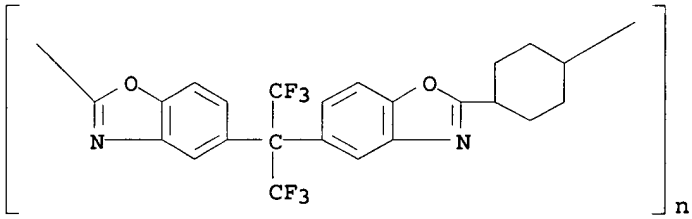
PRIORITY APPLN. INFO.: JP 2002-172885 20020613

AB The invention relates to polybenzoxazole precursors having a repeating unit COXCONHY(OH)2NH (X = divalent organic group; Y = tetravalent organic group; X and/or Y having alicyclic structure in a main chain) with i-line transmission ≥1% at thickness 10 μm and elongation at break of their cyclized polybenzoxazoles ≥25%. The **elec. parts** have the polybenzoxazole layers as a surface protective films or interlayer insulators.
IT **554455-52-6P 645403-45-8P 645403-47-0P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(photoimaging compns. having alicyclic-containing polybenzoxazole precursors with good i-line transmission for heat-resistant interlayer dielec.)
RN 554455-52-6 HCAPLUS

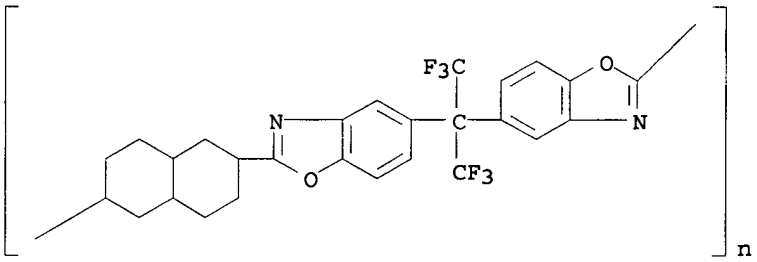
CN Poly(2,5-benzoxazolediyloxy-5,2-benzoxazolediyl-1,4-cyclohexanediyl) (9CI) (CA INDEX NAME)



RN 645403-45-8 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl-1,4-cyclohexanediyl] (9CI) (CA INDEX NAME)



RN 645403-47-0 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl(decahydro-2,6-naphthalenediyl)] (9CI) (CA INDEX NAME)



IC ICM C08G073-22
ICS G03F007-004; G03F007-037; H01L021-027; H01L021-312; H01L021-768
CC 76-10 (Electric Phenomena)
Section cross-reference(s): 38, 74
ST polybenzoxazole precursor alicyclic photoimaging interlayer insulator; **elec part** polybenzoxazole i line transmission
IT **Electric apparatus**
Electric insulators
Photoimaging materials
(photoimaging compns. having alicyclic-containing polybenzoxazole precursors with good i-line transmission for heat-resistant interlayer dielec.)

IT **554455-52-6P 645403-45-8P 645403-47-0P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(photoimaging compns. having alicyclic-containing polybenzoxazole precursors with good i-line transmission for heat-resistant interlayer dielec.)

L121 ANSWER 14 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:17958 HCAPLUS
DOCUMENT NUMBER: 140:60818
TITLE: Manufacture of organic insulating films with good heat stability and low water absorption and of their materials
INVENTOR(S): Izumi, Atsushi; Murayama, Kazumoto
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004002735	A2	20040108	JP 2003-78918	2003 0320
PRIORITY APPLN. INFO.:			JP 2002-96319 A	2002 0329

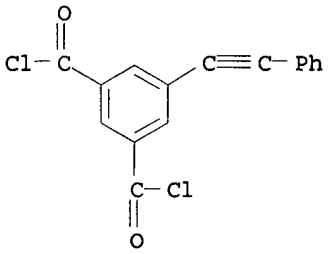
AB The title films, satisfying thickness 0.05-100 μm and average surface roughness (Ra) ≤5% of the thickness, are manufactured by application of organic solvent-based dielec. dispersions or solns. on substrates followed by heat treatment. In the preparation of the dielecs., two kinds of bivalent bisaminophenols (Markush given) are reacted with ethynyl-containing dicarboxylic acids having bivalent functional groups (Markush given) to form polyamides which are then reacted with oligomers having substituents reactive to carboxyl, amino, or hydroxy of the polyamides to give copolymers. The films are useful for cover-coat layers, solder resists, liquid crystal alignment layers, etc. Thus, 3,3'-diamino-4,4'-dihydroxydiphenyl ether 45, 4,4'-diamino-3,3'-dihydroxydiphenyl ether 45, 5-phenylethynylisophthaloyl dichloride 50, and 5-ethynylisophthaloyl dichloride 50 mmol were polymerized at 25° in NMP and then reacted with 9 mmol polypropylene glycol bis(2-aminopropyl) ether in the presence of Et3N to give a copolymer of Mw 45,000, which was dissolved in cyclohexanone, applied on a Si wafer, and heat treated at 90° and then baked at 400° to give a polybenzoxazole resin layer showing Ra 0.3% of the thickness, Tg >450°, and water absorption 0.2%.

IT **638163-45-8P 638163-46-9P 638163-47-0P**
638163-48-1P 638163-49-2P 638163-50-5DP
, reaction products with aminobenzoate-terminated styrene oligomers
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(manufacture of organic dielec. films with good heat stability and low

water absorption for **electronic devices**)
RN 638163-45-8 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-(phenylethynyl)-, polymer with α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)poly[oxy(methyl-1,2-ethanediyl)], 2-ethynyl-1,4-benzenedicarbonyl dichloride, 3,3'-oxybis[6-aminophenol] and 4,4'-oxybis[2-aminophenol], block (9CI) (CA INDEX NAME)

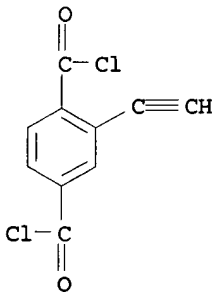
CM 1

CRN 393543-14-1
CMF C16 H8 Cl2 O2



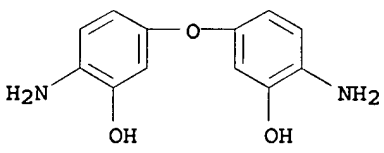
CM 2

CRN 393543-09-4
CMF C10 H4 Cl2 O2



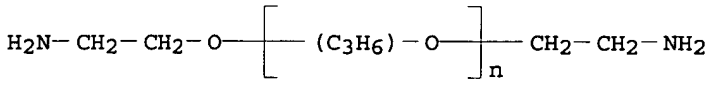
CM 3

CRN 20817-05-4
CMF C12 H12 N2 O3



CM 4

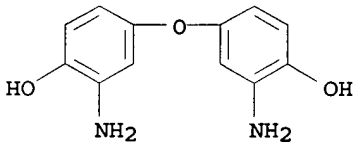
CRN 9046-10-0
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



2 (D1—Me)

CM 5

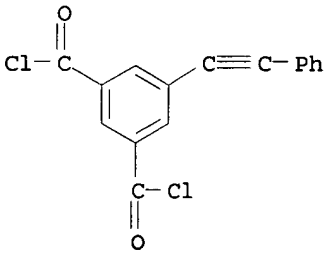
CRN 6423-17-2
CMF C12 H12 N2 O3



RN 638163-46-9 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-(phenylethynyl)-, polymer with α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)poly[oxy(methyl-1,2-ethanediyl)], 3,3'-diamino[1,1'-biphenyl]-4,4'-diol, 2-ethynyl-1,4-benzenedicarbonyl dichloride and 3,3'-oxybis[6-aminophenol], block (9CI) (CA INDEX NAME)

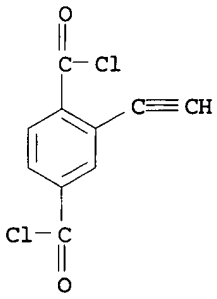
CM 1

CRN 393543-14-1
CMF C16 H8 Cl2 O2



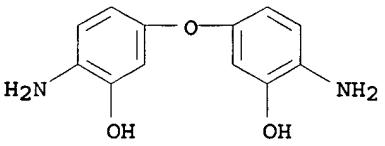
CM 2

CRN 393543-09-4
CMF C10 H4 Cl2 O2



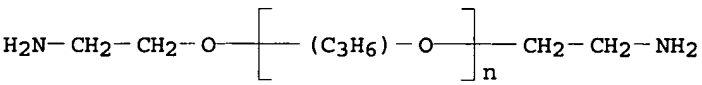
CM 3

CRN 20817-05-4
CMF C12 H12 N2 O3



CM 4

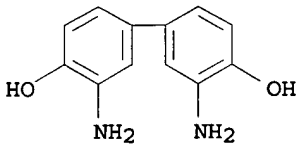
CRN 9046-10-0
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



2 (D1—Me)

CM 5

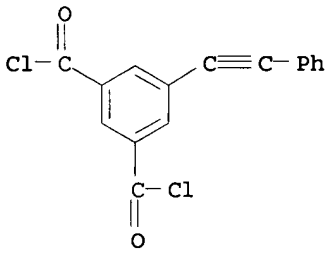
CRN 4194-40-5
CMF C12 H12 N2 O2



RN 638163-47-0 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-(phenylethynyl)-, polymer with α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)poly[oxy(methyl-1,2-ethanediyl)], 2-ethynyl-1,4-benzenedicarbonyl dichloride, 3,3'-(9H-fluoren-9-ylidene)bis[6-aminophenol] and 3,3'-oxybis[6-aminophenol], block (9CI) (CA INDEX NAME)

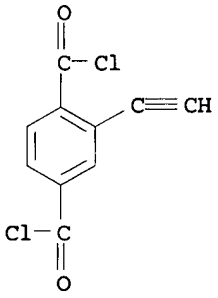
CM 1

CRN 393543-14-1
CMF C16 H8 Cl2 O2



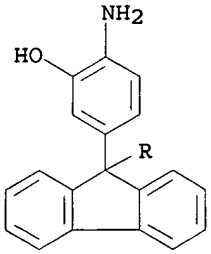
CM 2

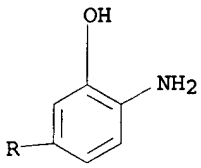
CRN 393543-09-4
CMF C10 H4 Cl2 O2



CM 3

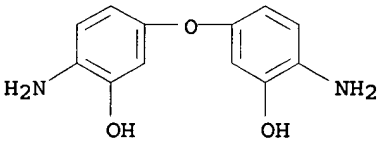
CRN 152480-72-3
CMF C25 H20 N2 O2





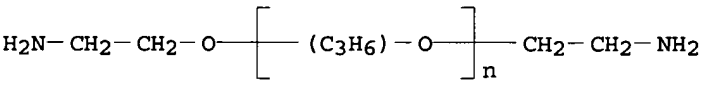
CM 4

CRN 20817-05-4
CMF C12 H12 N2 O3



CM 5

CRN 9046-10-0
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS

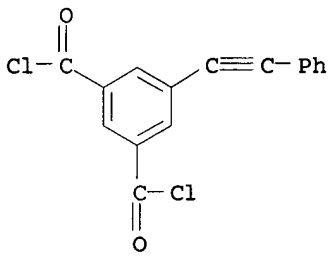


2 (D1—Me)

RN 638163-48-1 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-(phenylethynyl)-, polymer with α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)poly[oxy(methyl-1,2-ethanediyl)], 3,3'-diamino[1,1'-biphenyl]-4,4'-diol, 4,4'-diamino[1,1'-biphenyl]-3,3'-diol and 2-ethynyl-1,4-benzenedicarbonyl dichloride, block (9CI) (CA INDEX NAME)

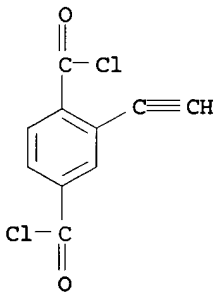
CM 1

CRN 393543-14-1
CMF C16 H8 Cl2 O2



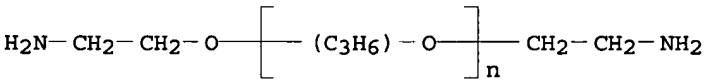
CM 2

CRN 393543-09-4
CMF C10 H4 Cl2 O2



CM 3

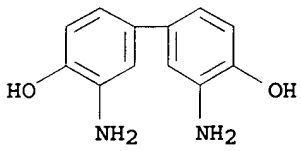
CRN 9046-10-0
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



2 (D1—Me)

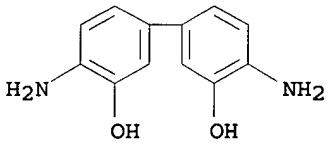
CM 4

CRN 4194-40-5
CMF C12 H12 N2 O2



CM 5

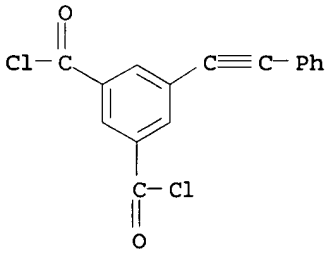
CRN 2373-98-0
CMF C12 H12 N2 O2



RN 638163-49-2 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-(phenylethynyl)-, polymer with 2-ethynyl-1,4-benzenedicarbonyl dichloride, 3,3'-(9H-fluoren-9-ylidene)bis[6-aminophenol] and 3,3'-oxybis[6-aminophenol] (9CI) (CA INDEX NAME)

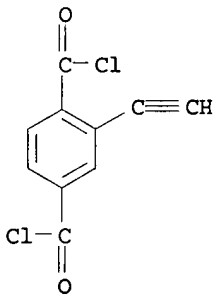
CM 1

CRN 393543-14-1
CMF C16 H8 Cl2 O2



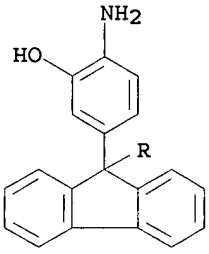
CM 2

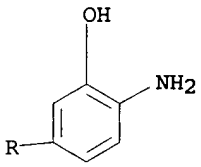
CRN 393543-09-4
CMF C10 H4 Cl2 O2



CM 3

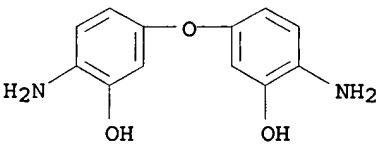
CRN 152480-72-3
CMF C25 H20 N2 O2





CM 4

CRN 20817-05-4
CMF C12 H12 N2 O3

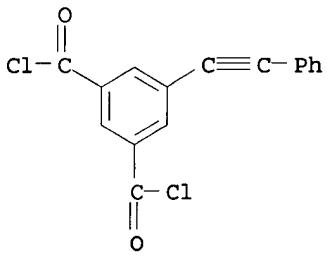


RN 638163-50-5 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-(phenylethynyl)-, polymer with 3,3'-diamino[1,1'-biphenyl]-4,4'-diol, 4,4'-diamino[1,1'-biphenyl]-3,3'-diol and 2-ethynyl-1,4-benzenedicarbonyl dichloride (9CI)

(CA INDEX NAME)

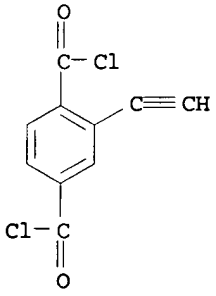
CM 1

CRN 393543-14-1
CMF C16 H8 Cl2 O2



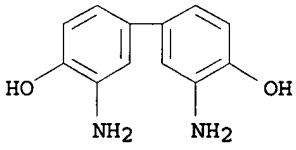
CM 2

CRN 393543-09-4
CMF C10 H4 Cl2 O2



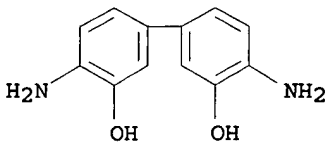
CM 3

CRN 4194-40-5
CMF C12 H12 N2 O2



CM 4

CRN 2373-98-0
CMF C12 H12 N2 O2



IC ICM C08G081-00
ICS B05D003-02; B32B005-18; B32B007-02; B32B027-34; H01L021-312; H05K003-28; H05K003-46
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
IT Heat-resistant materials
(dielec., porous, films; manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)
IT Porous materials
(films, dielec., heat resistant; manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)
IT **Electric insulators**
(heat-resistant, porous, films; manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)
IT Polybenzoxazoles
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)
IT Polyethers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-; manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)
IT Polyethers, uses
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyester-, block, diol derivs., reaction products with ethynyl-containing polybenzoxazoles; manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)
IT Polyesters, uses
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyether-, block, diol derivs., reaction products with ethynyl-containing polybenzoxazoles; manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)
IT Polybenzoxazoles
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-; manufacture of organic dielec. films with good heat stability and low water absorption for **electronic**

devices)
IT Films
(porous, dielec., heat resistant; manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)
IT Dielectric films
(porous, heat-resistant; manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)
IT 150-13-0DP, 4-Aminobenzoic acid, reaction products with oligomeric polystyrene and polybenzoxazoles **638163-45-8P 638163-46-9P 638163-47-0P 638163-48-1P 638163-49-2P 638163-50-5DP**, reaction products with aminobenzoate-terminated styrene oligomers
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)
IT 75-21-8, Ethylene oxide, reactions 122-04-3, 4-Nitrobenzoic acid chloride 110736-71-5, Placcel 240
RL: RCT (Reactant); RACT (Reactant or reagent)
(manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)
IT 9003-53-6DP, Polystyrene, reaction products with 4-aminobenzoic acid and polybenzoxazoles 9011-14-7DP, Poly(methyl methacrylate), reaction products with 4-aminobenzoic acid and polybenzoxazoles 25014-31-7DP, α-Methylstyrene homopolymer, p-aminobenzoate-terminated, reaction products with polybenzoxazoles 25248-42-4DP, Polycaprolactone, diol derivs., p-aminobenzoate ester, reaction products with ethynyl-containing polybenzoxazoles
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(oligomeric; manufacture of organic dielec. films with good heat stability and low water absorption for **electronic devices**)

L121 ANSWER 15 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:929990 HCAPLUS
DOCUMENT NUMBER: 140:10608
TITLE: Positive-working photosensitive polymer compositions with high sensitivity, manufacture of relief patterns using them, and **electronic parts** using them
INVENTOR(S): Nunomura, Masataka; Oe, Tadayuki; Nakano, Hajime; Tsumaru, Yoshiko
PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2003337415	A2	20031128	JP 2002-143166	2002 0517
EP 1376231	A1	20040102	EP 2003-11014	2003 0516
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2004029045	A1	20040212	US 2003-440301	2003 0519
PRIORITY APPLN. INFO.:			JP 2002-143166 A	2002 0517
			JP 2003-69898 A	2003 0314

AB The compns., useful for surface protection films and interlayer dielecs., contain polyimides (or their precursors) bearing protected acid groups and no amino terminals and photoacid generators for dissociating the protective groups.

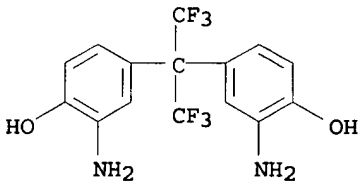
IT **627512-38-3DP**, reaction products with vinyl Et ether
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

RN 627512-38-3 HCAPLUS

CN 1,2,4-Benzenetricarbonyl trichloride, polymer with 5,5'-oxybis[1,3-isobenzofurandione] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

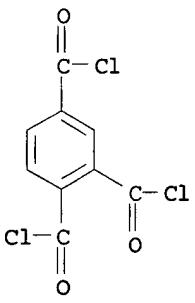
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



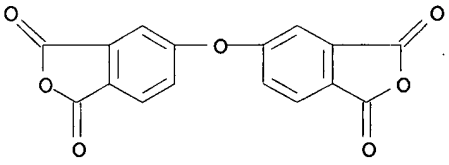
CM 2

CRN 3867-55-8
CMF C9 H3 Cl3 O3



CM 3

CRN 1823-59-2
CMF C16 H6 O7



IC ICM G03F007-039
ICS C08G073-10; G03F007-037; H01L021-312
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76
ST polyimide relief pattern pos photosensitive polymer; interlayer dielec polyimide acid group protection; **electronic part** amino protection polyimide patterning
IT Polyethers, reactions
Polysulfones, reactions
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polyamic acid-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)
IT Polyethers, reactions
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polyamic acid-polyamide-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)
IT Polyethers, reactions
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polyamic acid-polyester-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for

electronic parts)

IT Polyamides, reactions
Polyesters, reactions
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polyamic acid-polyether-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyimides, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide-polyester-polyether-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyethers, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide-polyester-polyimide-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyamic acids
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polyamide-polyether-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyimides, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide-polyether-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyesters, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide-polyether-polyimide-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyethers, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide-polyimide-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyamic acids
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polyester-polyether-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyimides, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-polyether-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyamides, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-polyether-polyimide-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyethers, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-polyimide-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyamic acids
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polyether-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyamides, preparation
Polyesters, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-polyimide-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polysulfones, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyamic acids
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polysulfone-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT Polyimides, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polysulfone-; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT **Electric insulators**
Photoimaging materials
(pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity

for manufacturing relief patterns for **electronic parts**)

IT Semiconductor devices
(surface protection films and interlayer dielecs. for; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT 1823-59-2, 3,3',4,4'-Diphenyl ether tetracarboxylic dianhydride 2215-89-6, 4,4'-Dicarboxydiphenyl ether 7719-09-7, Thionyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(for polyimide preparation; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT 1143-72-2D, 2,3,4-Trihydroxybenzophenone, reaction products with naphthoquinonediazidesulfonyl chloride 36451-09-9D, 1,2-Naphthoquinonediazide-4-sulfonyl chloride, reaction products with trihydroxybenzophenone 85342-62-7 121172-98-3, p-Nitrobenzyl 9,10-dimethoxyanthracene-2-sulfonate 137308-86-2, Diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate 627512-39-4
RL: CAT (Catalyst use); USES (Uses)
(photoacid generator; pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

IT 98-59-9DP, p-Toluenesulfonyl chloride, reaction products with diaminodiphenyl ether, polymers with biphenyltetracarboxylic dianhydride 100-39-0DP, Benzyl bromide, reaction products with diamine, polymers with tetracarboxylic acid diester dichloride 101-80-4DP, 4,4'-Diaminodiphenyl ether, reaction products with toluenesulfonyl chloride, polymers with biphenyltetracarboxylic dianhydride 109-92-2DP, Vinyl ethyl ether, reaction products with polyimides 110-87-2DP, 3,4-Dihydro-2H-pyran, reaction products with polyimide precursors 115-11-7DP, Isobutene, reaction products with amino-protected polyamic acids 542-88-1DP, Chloromethyl ether, reaction products with polyimide precursors 2420-87-3DP, 3,3',4,4'-Biphenyltetracarboxylic dianhydride, polymers with partially protected diaminodiphenyl ether, reaction products with isobutene 7158-32-9DP, polymers with partially protected diamine and tetracarboxylic acid diester dichloride, reaction products with dihydropyran 24424-99-5DP, Di-tert-butyl dicarbonate, reaction products with polyimide precursors 77238-85-8DP, 3,3',4,4'-Biphenyltetracarboxylic dianhydride-4,4'-diaminodiphenyl sulfone copolymer, reaction products with chloromethyl Et ether 83558-87-6DP, reaction products with benzyl bromide, polymers with tetracarboxylic acid diester dichloride 121333-86-6DP, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-3,3',4,4'-diphenyl ether tetracarboxylic dianhydride copolymer, reaction products with di-t-Bu dicarbonate 158853-02-2DP, reaction products with chloromethyl Et ether 172520-37-5DP, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-3,3',4,4'-diphenyl ether tetracarboxylic dianhydride copolymer, polyamic acid SRU, reaction products with di-t-Bu dicarbonate **627512-38-3DP**, reaction products with vinyl Et ether
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity

for manufacturing relief patterns for **electronic parts**)

IT 77243-66-4P 121334-10-9P, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-3,3',4,4'-diphenyl ether tetracarboxylic dianhydride copolymer, polyimide SRU
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working photosensitive compns. containing polyimide precursors bearing protected acid groups with high sensitivity for manufacturing relief patterns for **electronic parts**)

L121 ANSWER 16 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:607798 HCAPLUS
DOCUMENT NUMBER: 139:171098
TITLE: Electric circuit substrate having optical waveguide made of fluorine-containing polybenzoxazole
INVENTOR(S): Otsuki, Tomohito
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003222744	A2	20030808	JP 2002-22536	2002 0130
PRIORITY APPLN. INFO.:			JP 2002-22536	2002 0130

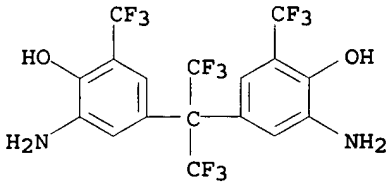
AB The elec. circuit board has the optical waveguide made of a F-containing polybenzoxazole obtained by ring closure of a precursor [C(O)NHXNHC(O)Y]n (X and/or Y is F-containing divalent organic group and the rest is a divalent organic group; n = 1-1000). The optical waveguide may consist of a core and a clad. The substrate may be a ceramic substrate, a Si single or multilayer circuit board, or an organic single or multilayer circuit board. The single mode optical waveguide, whose n is accurately regulated, is suitable for high-speed optical information processing under low elec. power.

IT **335232-16-1P 438202-03-0P**, 2,2'-Bis(trifluoromethyl)-4,4'-biphenylenedicarboxylic chloride-1,3-diamino-4,6-dihydroxydifluorobenzene copolymer **438202-06-3P 438202-21-2P 438202-23-4P 438202-30-3P 438202-32-5P 438202-35-8P 438202-38-1P 438202-41-6P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(elec. circuit substrate having optical waveguide made of fluorine-containing polybenzoxazole)

RN 335232-16-1 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-amino-6-(trifluoromethyl)phenol] (9CI) (CA INDEX NAME)

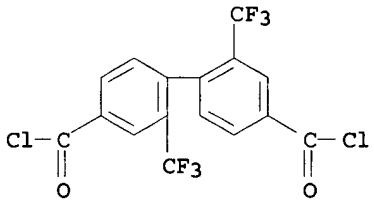
CM 1

CRN 265311-51-1
CMF C17 H10 F12 N2 O2



CM 2

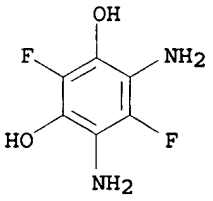
CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2



RN 438202-03-0 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 4,6-diamino-2,5-difluoro-1,3-benzenediol (9CI) (CA INDEX NAME)

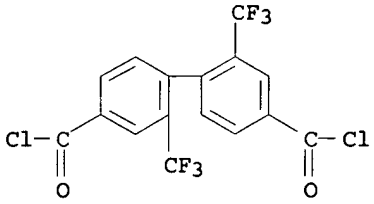
CM 1

CRN 276870-15-6
CMF C6 H6 F2 N2 O2



CM 2

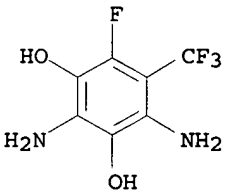
CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2



RN 438202-06-3 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 2,4-diamino-6-fluoro-5-(trifluoromethyl)-1,3-benzenediol (9CI) (CA INDEX NAME)

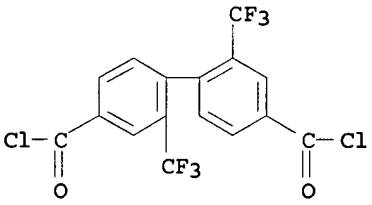
CM 1

CRN 438202-05-2
CMF C7 H6 F4 N2 O2



CM 2

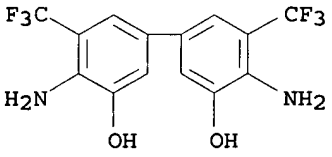
CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2



RN 438202-21-2 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 4,4'-diamino-5,5'-bis(trifluoromethyl)[1,1'-biphenyl]-3,3'-diol (9CI) (CA INDEX NAME)

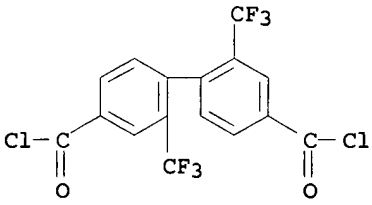
CM 1

CRN 438202-20-1
CMF C14 H10 F6 N2 O2

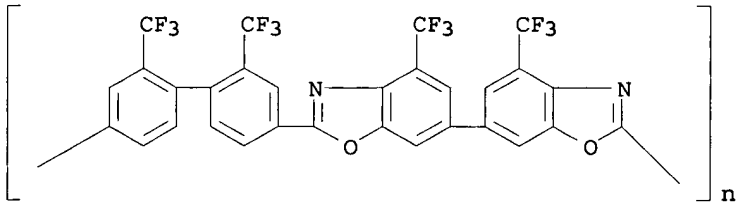


CM 2

CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2



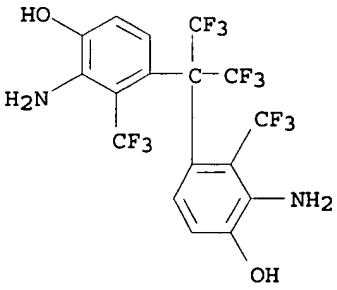
RN 438202-23-4 HCAPLUS
CN Poly[[4,4'-bis(trifluoromethyl)[6,6'-bibenzoxazole]-2,2'-diyl][2,2'-bis(trifluoromethyl)[1,1'-biphenyl]-4,4'-diyl]] (9CI) (CA INDEX NAME)



RN 438202-30-3 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-amino-3-(trifluoromethyl)phenol] (9CI) (CA INDEX NAME)

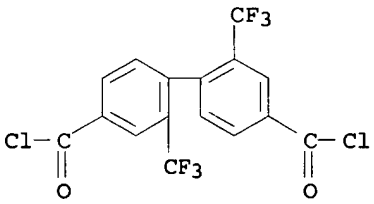
CM 1

CRN 438202-29-0
CMF C17 H10 F12 N2 O2

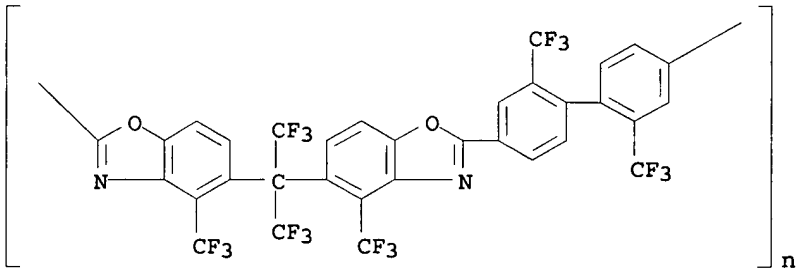


CM 2

CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2



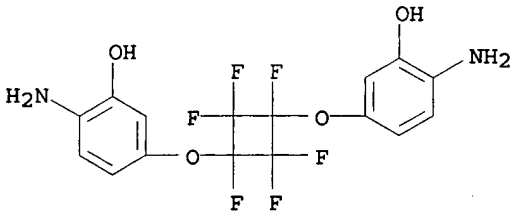
RN 438202-32-5 HCAPLUS
CN Poly[[4-(trifluoromethyl)-2,5-benzoxazolediyl][2,2,2-trifluoro-1-(trifluoromethyl)ethylidene][4-(trifluoromethyl)-5,2-benzoxazolediyl][2,2'-bis(trifluoromethyl)[1,1'-biphenyl]-4,4'-diyl]] (9CI) (CA INDEX NAME)



RN 438202-35-8 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 3,3'-[(1,2,2,3,4,4-hexafluoro-1,3-cyclobutanediyl)bis(oxy)]bis[6-aminophenol] (9CI) (CA INDEX NAME)

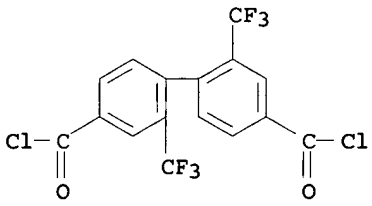
CM 1

CRN 438202-34-7
CMF C16 H12 F6 N2 O4

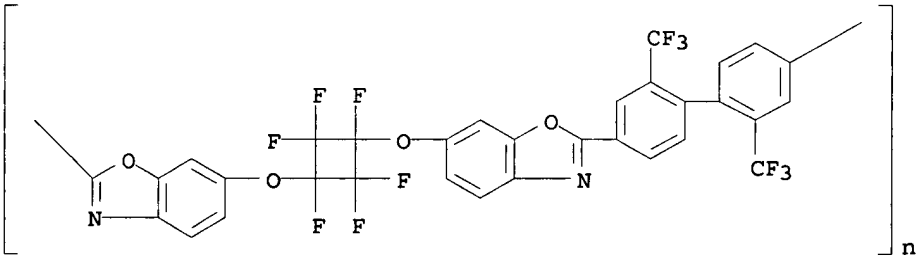


CM 2

CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2



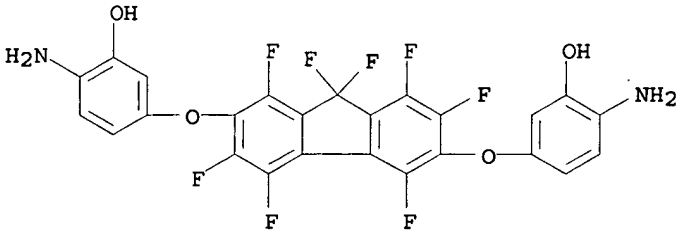
RN 438202-38-1 HCAPLUS
CN Poly[2,6-benzoxazolediyloxy(1,2,2,3,4,4-hexafluoro-1,3-cyclobutanediyl)oxy-6,2-benzoxazolediyl[2,2'-bis(trifluoromethyl)[1,1'-biphenyl]-4,4'-diyl]] (9CI) (CA INDEX NAME)



RN 438202-41-6 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 3,3'-[(1,2,4,5,6,8,9,9-octafluoro-9H-fluorene-3,7-diyl)bis(oxy)]bis[6-aminophenol] (9CI) (CA INDEX NAME)

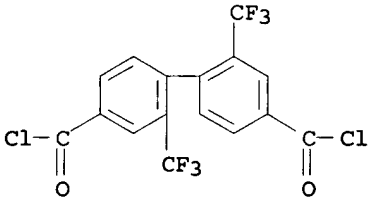
CM 1

CRN 438202-40-5
CMF C25 H12 F8 N2 O4



CM 2

CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2



IC ICM G02B006-12
ICS C08G073-22; G02B006-13; H05K001-02
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38, 57, 76
IT Photodiodes
Semiconductor **devices**
Semiconductor lasers
(on **elec.** circuit substrate having optical waveguide made of fluorine-containing polybenzoxazole)
IT **Electric insulators**
(polybenzoxazole; in **elec.** circuit substrate having optical waveguide made of fluorine-containing polybenzoxazole)
IT **335232-16-1P** 335232-17-2P **438202-03-0P**,
2,2'-Bis(trifluoromethyl)-4,4'-biphenylenedicarboxylic chloride-1,3-diamino-4,6-dihydroxydifluorobenzene copolymer
438202-04-1P **438202-06-3P** 438202-10-9P 438202-11-0P
438202-12-1P 438202-14-3P 438202-18-7P **438202-21-2P**
438202-23-4P 438202-25-6P **438202-30-3P**
438202-32-5P **438202-35-8P** **438202-38-1P**
438202-41-6P 438527-23-2P 438527-30-1P 575455-24-2P
575465-21-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(elec. circuit substrate having optical waveguide made of fluorine-containing polybenzoxazole)

L121 ANSWER 17 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:349523 HCAPLUS
DOCUMENT NUMBER: 138:354926
TITLE: **Electrically insulating** films, materials and coating varnishes for them, and semiconductor devices

INVENTOR(S): Oki, Hiromi; Nakashima, Michio; Hase, Yoko; Izumi, Atsushi
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003128990	A2	20030508	JP 2001-331959	2001 1030

PRIORITY APPLN. INFO.: JP 2001-331959 2001 1030

AB **Elec. insulating** films, useful as interlayer dielec. films for multilayer wiring boards or surface protective layers for semiconductors, have fine pores and comprise resin layers mainly comprising polybenzoxazole structures, prepared by thermal condensation and crosslinking reactions of materials or varnishes containing film-forming polyamide copolymers prepared by reaction of polyamides [NHX(OH)2NHCOYCO]m[NHX(OH)2NHCOZCO]n [R1-R4 = H, monovalent organic group; X = aromatic ring-containing tetravalent group; Y = divalent group; Z = divalent group (structures of X, Y, and Z are given); m >0; n ≥0; 2 ≤ m + n ≤ 1000; 0.05 ≤ m/(m + n) ≤ 1] having branched structures prepared from bisaminophenols and polybasic carboxylic acids, with reactive oligomers having substituents reactive towards carboxyl, amino, or OH groups in the polyamide structures. Thus, 2,2-bis(3-amino-4-hydroxyphenyl)hexafluoropropane 35.9, trimesic acid trichloride 0.53, and 4-ethynyl-2,6-naphthalenedicarboxylic acid dichloride 27.7 g were polymerized in N-methyl-2-pyrrolidone (NMP), the reaction mixture was mixed with Et3N, and stirred with a γ-butyrolactone solution containing 4-aminobenzoate ester-terminated styrene oligomer (Mn 9600; preparation given) to give a copolymer containing 37% reactive oligomer units, which was dissolved in NMP, applied on an Al-deposited Si wafer, dried at 120° for 240 s, heated at 300° for 60 min under N to form a film of a polybenzoxazole having styrene oligomer units at the terminals, and heated at 400° for 60 min for decomposition of the oligomer units to form a polybenzoxazole film having ≤15-nm pores, dielec. constant (at 1 MHz) 2.1, heat resistance 563°, Tg >450°, and water absorption 0.2%. An electrode pattern was formed on the polybenzoxazole film by vapor deposition of Al.

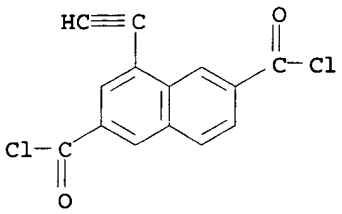
IT **519142-88-2DP**, reaction products with aminobenzoate-terminated styrene oligomer **519142-89-3P** **519142-90-6P** **519142-91-7P** **519142-93-9P** **519142-94-0P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thermally decomposed, polybenzoxazole; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

RN 519142-88-2 HCAPLUS
CN 1,3,5-Benzenetricarbonyl trichloride, polymer with

4-ethynyl-2,6-naphthalenedicarbonyl dichloride and
4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-
aminophenol] (9CI) (CA INDEX NAME)

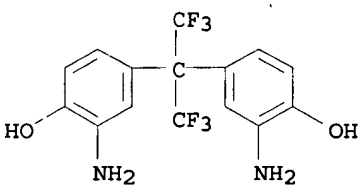
CM 1

CRN 405931-94-4
CMF C14 H6 Cl2 O2



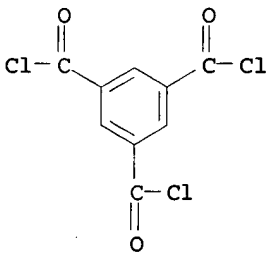
CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 3

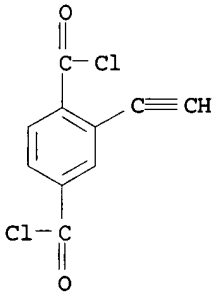
CRN 4422-95-1
CMF C9 H3 Cl3 O3



RN 519142-89-3 HCAPLUS
CN [1,1'-Biphenyl]-3,3',5,5'-tetracarbonyl tetrachloride, polymer
with α-(2-aminopropyl)-ω-(2-
aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)],
2-ethynyl-1,4-benzenedicarbonyl dichloride and
3,3'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[6-aminophenol]
(9CI) (CA INDEX NAME)

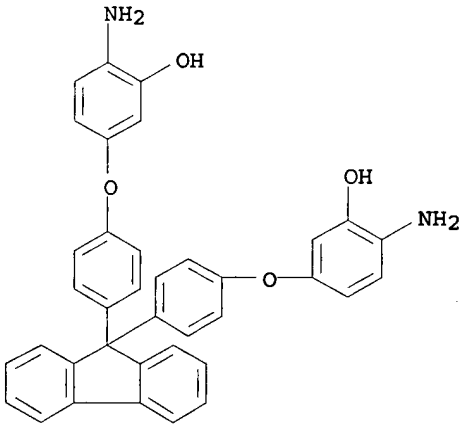
CM 1

CRN 393543-09-4
CMF C10 H4 Cl2 O2



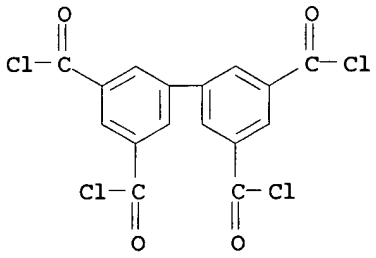
CM 2

CRN 359642-31-2
CMF C37 H28 N2 O4



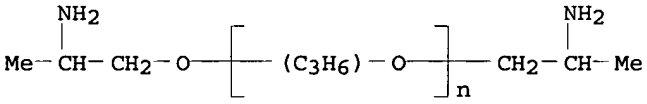
CM 3

CRN 113797-72-1
CMF C16 H6 Cl4 O4



CM 4

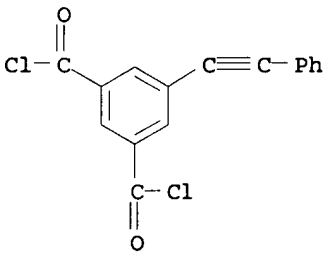
CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



RN 519142-90-6 HCAPLUS
CN 1,3,5-Benzenetricarbonyl trichloride, polymer with α-(2-aminopropyl)-ω-(2-aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)], 1,4-benzenedicarbonyl dichloride, 3,3'-diamino[1,1'-biphenyl]-4,4'-diol and 5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride (9CI) (CA INDEX NAME)

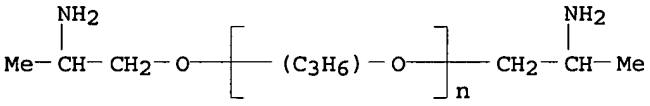
CM 1

CRN 393543-14-1
CMF C16 H8 Cl2 O2



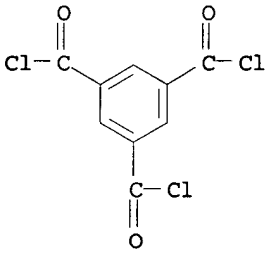
CM 2

CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



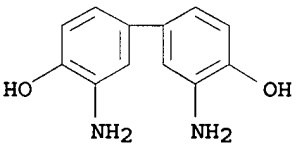
CM 3

CRN 4422-95-1
CMF C9 H3 Cl3 O3



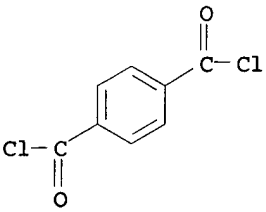
CM 4

CRN 4194-40-5
CMF C12 H12 N2 O2



CM 5

CRN 100-20-9
CMF C8 H4 Cl2 O2

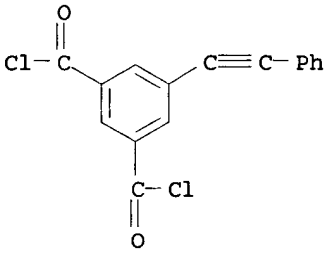


RN 519142-91-7 HCAPLUS
CN 1,2,4-Benzenetricarbonyl trichloride, polymer with α-(2-aminopropyl)-ω-(2-aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)], 3,3'-diamino[1,1'-biphenyl]-4,4'-diol,

2-ethynyl-1,4-benzenedicarbonyl dichloride and
5-(phenylethynyl)-1,3-benzenedicarbonyl dichloride (9CI) (CA INDEX NAME)

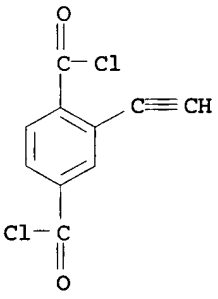
CM 1

CRN 393543-14-1
CMF C16 H8 Cl2 O2



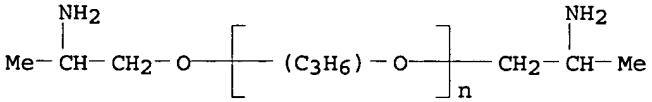
CM 2

CRN 393543-09-4
CMF C10 H4 Cl2 O2



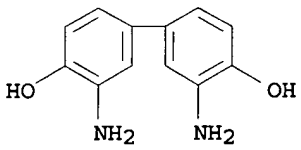
CM 3

CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



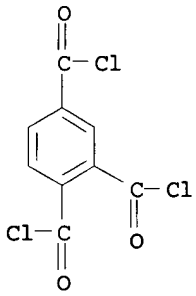
CM 4

CRN 4194-40-5
CMF C12 H12 N2 O2



CM 5

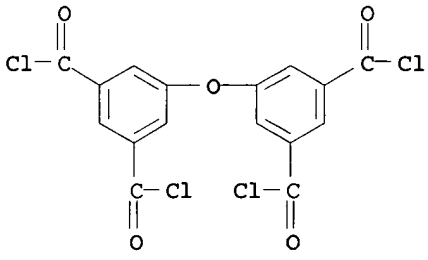
CRN 3867-55-8
CMF C9 H3 Cl3 O3



RN 519142-93-9 HCAPLUS
CN 2,7-Biphenylenedicarbonyl dichloride, polymer with α-(2-aminopropyl)-ω-(2-aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)], 5,5'-oxybis[1,3-benzenedicarbonyl dichloride] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

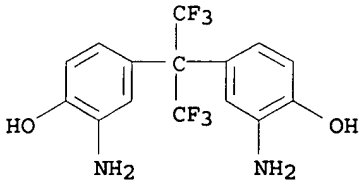
CM 1

CRN 519142-92-8
CMF C16 H6 Cl4 O5



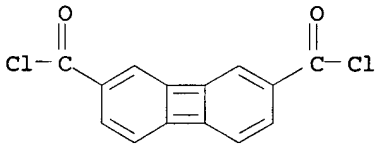
CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



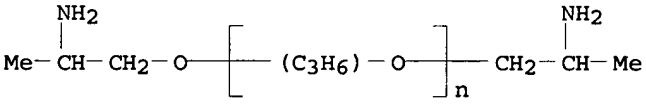
CM 3

CRN 69417-81-8
CMF C14 H6 Cl2 O2



CM 4

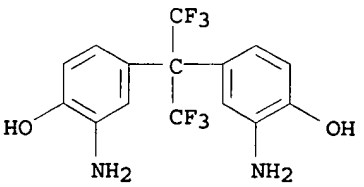
CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



RN 519142-94-0 HCAPLUS
CN 1,3,5-Cyclohexanetricarbonyl trichloride, polymer with α-(2-aminopropyl)-ω-(2-aminopropoxy)poly[oxy(methyl-1,2-ethanediyl)], 4,4'-(1,2-ethynediyl)bis[benzoyl chloride] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

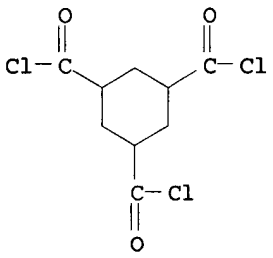
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



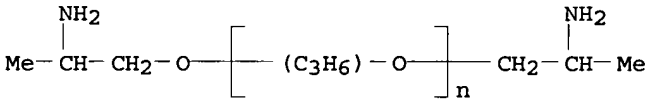
CM 2

CRN 29305-31-5
CMF C9 H9 Cl3 O3



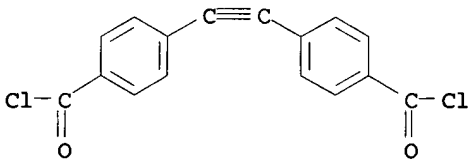
CM 3

CRN 26403-64-5
CMF (C3 H6 O)n C6 H16 N2 O
CCI IDS, PMS



CM 4

CRN 16819-44-6
CMF C16 H8 Cl2 O2



IC ICM C09D177-00
ICS C08G073-22; C08J009-02; C09D005-25; C09D177-06; C09D179-04; H01B003-30; H05K003-28; H05K003-46; C08L079-04
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 25, 35, 37, 42, 76
ST **elec insulating** porous film polybenzoxazole semiconductor; reactive oligomer polyamide polybenzoxazole porous film; aminobenzoate polystyrene polyamide polybenzoxazole porous film; heat water resistance dielec coating polybenzoxazole; multilayer wiring board insulator film polybenzoxazole
IT **Electric insulators**
(coatings; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Semiconductor **devices**
Varnishes
(**elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)
IT Polybenzoxazoles
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)
IT Polyamides, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)
IT Polybenzoxazoles
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)
IT Dielectric films
(heat- and water-resistant; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)
IT Water-resistant materials
(heat-resistant, dielec. films; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)
IT Printed circuit boards
(multilayer; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)
IT Polybenzoxazoles
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyacetylene-, fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)
IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyacetylene-polyamide-, fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)
IT Fluoropolymers, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyacetylene-polyamide-polyoxyalkylene-; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)
IT Fluoropolymers, preparation

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyacetylene-polybenzoxazole-; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyamides, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyacetylene-polyoxyalkylene-, fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Fluoropolymers, preparation
Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyamide-; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyamide-polyether-, cardo; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyamide-polyether-, fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyamide-polyether-; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Cardo polymers
Fluoropolymers, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyamide-polyether-polyoxyalkylene-; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyethers, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyamide-polyoxyalkylene, fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyethers, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyamide-polyoxyalkylene-, cardo; **elec. insulating** polybenzoxazole films having fine pores

prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyacetylenes, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyamide-polyoxyalkylene-, fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyethers, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyamide-polyoxyalkylene-; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyethers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-, cardo; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyacetylenes, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polybenzoxazole-, fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyethers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-, fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Fluoropolymers, uses
Polyethers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Cardo polymers
Fluoropolymers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-polyether-; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polybenzoxazoles
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-, cardo; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polybenzoxazoles
RL: IMF (Industrial manufacture); TEM (Technical or engineered

material use); PREP (Preparation); USES (Uses)
(polyether-, fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polybenzoxazoles
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyamides, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyether-polyoxyalkylene-, cardo; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyamides, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyether-polyoxyalkylene-, fluorine-containing; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyamides, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyether-polyoxyalkylene-; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Polyamides, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyoxyalkylene-; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT Heat-resistant materials
(water-resistant, dielec. films; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT 3034-86-4P, Methyl 4-ethynylbenzoate 16819-43-5P, 4,4'-Tolandicarboxylic acid 16882-08-9P 23351-91-9P, 5-Bromoisophthalic acid 51760-21-5P, Dimethyl 5-bromoisophthalate 168619-21-4P 217655-36-2P, 1-[3,5-Bis(methoxycarbonyl)phenyl]-2-phenylethyne 393543-03-8P, 4-[3,5-Bis(methoxycarbonyl)phenyl]-2-methyl-3-butyn-1-ol 393543-04-9P, 5-Ethynylisophthalic acid dipotassium salt
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(**elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT 99-31-0, 5-Aminoisophthalic acid 115-19-5, 3-Methyl-1-butyn-3-ol 122-04-3, 4-Nitrobenzoic acid chloride 358-23-6, Trifluoromethanesulfonic acid anhydride 619-42-1, Methyl 4-bromobenzoate 13036-02-7, Dimethyl 5-hydroxyisophthalate 62480-31-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(**elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT 16819-44-6P, 4,4'-Tolandicarboxylic acid dichloride 393543-05-0P 393543-14-1P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(monomer; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

IT 75-21-8DP, Ethylene oxide, reaction products with styrene oligomer, aminobenzoate ester, reaction products with polyamides 150-13-0DP, 4-Aminobenzoic acid, ester with hydroxy-terminated styrene oligomer, reaction products with polyamides 9003-53-6DP, Polystyrene, aminobenzoate-terminated, reaction products with polyamides **519142-88-2DP**, reaction products with aminobenzoate-terminated styrene oligomer **519142-89-3P 519142-90-6P 519142-91-7P 519142-93-9P 519142-94-0P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thermally decomposed, polybenzoxazole; **elec. insulating** polybenzoxazole films having fine pores prepared by heating of copolymers from branched polyamides and reactive oligomers for semiconductor devices)

L121 ANSWER 18 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:170378 HCAPLUS
DOCUMENT NUMBER: 138:222012
TITLE: Poly-o-hydroxy amides, polybenzoxazoles, **electronic** building **component** as well as procedure for their production
INVENTOR(S): Walter, Andreas; Sezi, Recai; Lowack, Klaus; Maltenberger, Anna
PATENT ASSIGNEE(S): Infineon Technologies AG, Germany
SOURCE: Ger., 32 pp.
CODEN: GWXXAW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10147927	C1	20030306	DE 2001-10147927	2001 0928
US 2003176623	A1	20030918	US 2002-261034	2002 0930
US 6900284	B2	20050531		
PRIORITY APPLN. INFO.:			DE 2001-10147927 A	2001 0928

DP rej

AB Poly-o-hydroxy amides are manufactured for cyclization to polybenzoxazoles that have good **elec. insulating** properties, heat resistance, adhesion, and filling properties for gaps with breath <100 nm and aspect ratio >4, and that are useful

in the damascene process. A typical poly-o-hydroxy amide was manufactured by polymerization of 0.52 mol 2,2-bis(3-amino-4-hydroxyphenyl)hexafluoropropane with 0.395 mol 2,2-bis(4-chlorocarbonyl)phenylhexafluoropropane and di-Ph ether 4,4'-dicarbonyl chloride in a NMP-γ-butyrolactone mixture in the presence of C5H5N and 5-(phenylethynyl)isophthaloyl chloride capping agent.

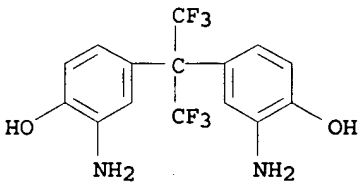
IT **116325-78-1DP**, reaction products with norbornenedicarbonyl chloride **500372-81-6DP**, reaction products with norbornenedicarbonyl chloride **500372-82-7DP**, reaction products with methacryloyl chloride **500372-83-8DP**, reaction products with norbornenedicarbonyl chloride **500372-85-0P 500372-86-1DP**, reaction products with norbornenedicarbonyl chloride **500372-87-2DP**, reaction products with norbornenedicarbonyl chloride **500372-88-3DP**, reaction products with norbornenedicarbonyl chloride **500373-31-9DP**, reaction products with norbornenedicarbonyl chloride
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

RN 116325-78-1 HCAPLUS

CN 1,3-Benzenedicarbonyl dichloride, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[benzoyl chloride] (9CI) (CA INDEX NAME)

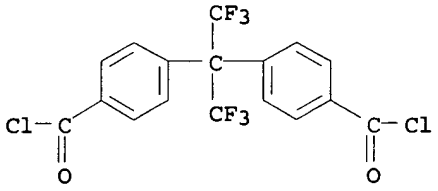
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



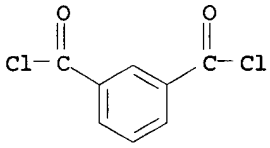
CM 2

CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



CM 3

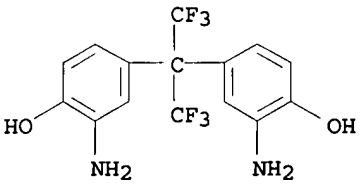
CRN 99-63-8
CMF C8 H4 Cl2 O2



RN 500372-81-6 HCAPLUS
CN Benzoyl chloride, 4,4'-oxybis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[benzoyl chloride] (9CI) (CA INDEX NAME)

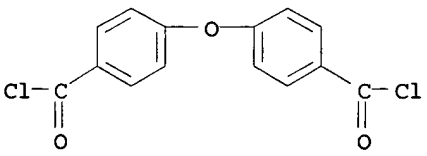
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



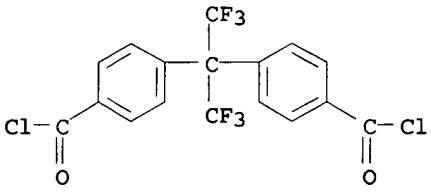
CM 2

CRN 7158-32-9
CMF C14 H8 Cl2 O3



CM 3

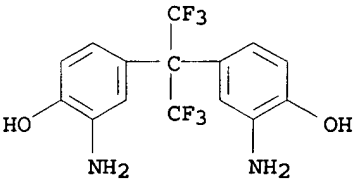
CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



RN 500372-82-7 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2,3-dicarbonyl dichloride, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[benzoyl chloride] (9CI) (CA INDEX NAME)

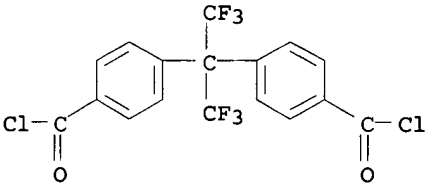
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



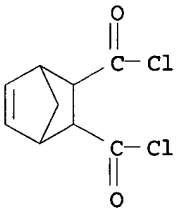
CM 2

CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



CM 3

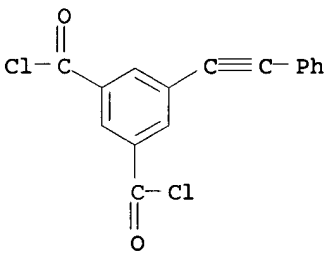
CRN 707-80-2
CMF C9 H8 Cl2 O2



RN 500372-83-8 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-(phenylethynyl)-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[benzoyl chloride] (9CI) (CA INDEX NAME)

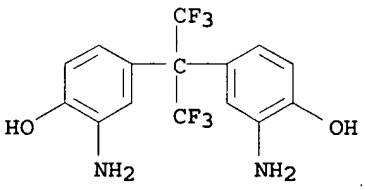
CM 1

CRN 393543-14-1
CMF C16 H8 Cl2 O2



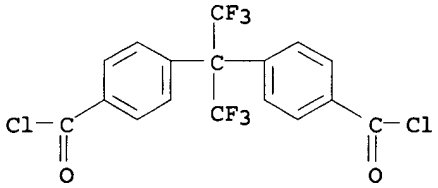
CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 3

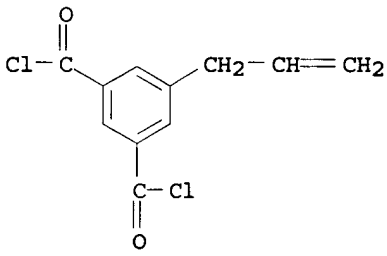
CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



RN 500372-85-0 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-(2-propenyl)-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[benzoyl chloride] (9CI) (CA INDEX NAME)

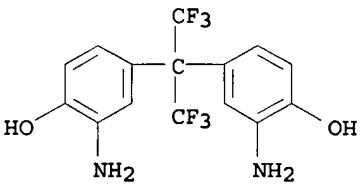
CM 1

CRN 500372-84-9
CMF C11 H8 Cl2 O2



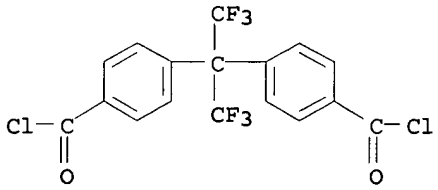
CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 3

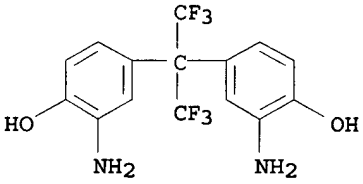
CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



RN 500372-86-1 HCAPLUS
CN 2,6-Naphthalenedicarbonyl dichloride, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[benzoyl chloride] (9CI) (CA INDEX NAME)

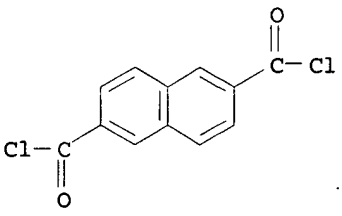
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



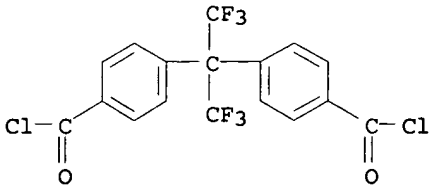
CM 2

CRN 2351-36-2
CMF C12 H6 Cl2 O2



CM 3

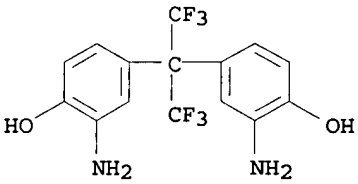
CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



RN 500372-87-2 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[benzoyl chloride] (9CI) (CA INDEX NAME)

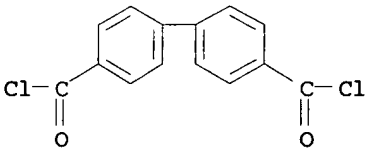
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



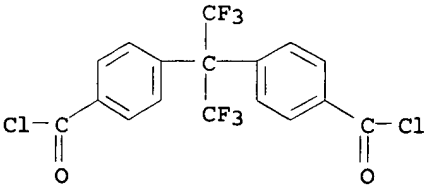
CM 2

CRN 2351-37-3
CMF C14 H8 Cl2 O2



CM 3

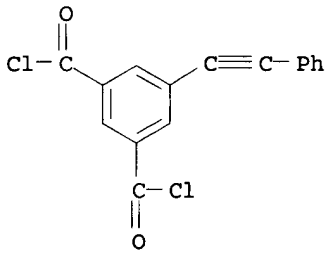
CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



RN 500372-88-3 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-(phenylethynyl)-, polymer with 4,4'-oxybis[benzoyl chloride] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

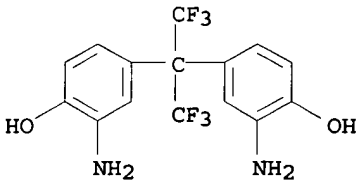
CM 1

CRN 393543-14-1
CMF C16 H8 Cl2 O2



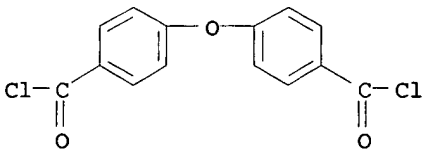
CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 3

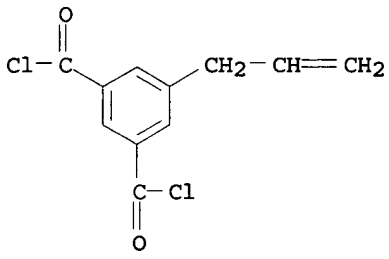
CRN 7158-32-9
CMF C14 H8 Cl2 O3



RN 500373-31-9 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-(2-propenyl)-, polymer with 4,4'-oxybis[benzoyl chloride], 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[benzoyl chloride] (9CI) (CA INDEX NAME)

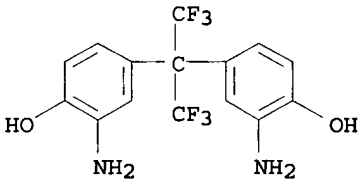
CM 1

CRN 500372-84-9
CMF C11 H8 Cl2 O2



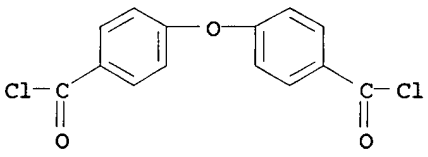
CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



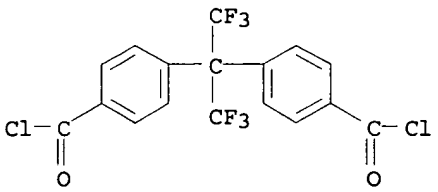
CM 3

CRN 7158-32-9
CMF C14 H8 Cl2 O3



CM 4

CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



IC ICM C08G073-22
ICS C09D005-25
CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 76
ST poly ortho hydroxy amide precursor polybenzoxazole **electronic component** manuf; diphenyl ether dicarbonyl chloride polyamide precursor manuf polybenzoxazole; bischlorocarbonylphenylhexa fluoropropane polyamide precursor manuf polybenzoxazole; bisaminohydroxyphenylhexa fluoropropane polyamide precursor manuf polybenzoxazole
IT Heat-resistant materials
(dielec.; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)
IT Water-resistant materials
(dielecs.; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)
IT Polyamides, preparation
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(fluorine-containing; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)
IT Polybenzoxazoles
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorine-containing; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)
IT **Electric insulators**
(heat-resistant; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)
IT **Electric apparatus**
(poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)
IT Polyethers, preparation
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or

engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyamide-, fluorine-containing; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

IT Fluoropolymers, preparation
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyamide-; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

IT Fluoropolymers, preparation
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyamide-polyether-; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

IT Polyethers, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-, fluorine-containing; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

IT Fluoropolymers, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

IT Fluoropolymers, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-polyether-; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

IT Polyamides, preparation
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(polyether-, fluorine-containing; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

IT Polybenzoxazoles

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-, fluorine-containing; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

IT **Electric insulators**
(water-resistant; poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

IT **116325-78-1DP**, reaction products with norbornenedicarbonyl chloride **500372-81-6DP**, reaction products with norbornenedicarbonyl chloride **500372-82-7DP**, reaction products with methacryloyl chloride **500372-83-8DP**, reaction products with norbornenedicarbonyl chloride **500372-85-0P 500372-86-1DP**, reaction products with norbornenedicarbonyl chloride **500372-87-2DP**, reaction products with norbornenedicarbonyl chloride **500372-88-3DP**, reaction products with norbornenedicarbonyl chloride **500373-31-9DP**, reaction products with norbornenedicarbonyl chloride
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

IT 707-80-2DP, 5-Norbornene-2,3-dicarbonyl chloride, reaction products with fluoropolymer-polybenzoxazoles 920-46-7DP, Methacryloyl chloride, reaction products with fluoropolymer-polybenzoxazoles 27063-48-5DP, 5-Norbornene-2-carbonyl chloride, reaction products with fluoropolymer-polybenzoxazoles
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(poly-o-hydroxy amides for manufacture of heat-resistant, **elec.-insulating** polybenzoxazoles with good gap-filling properties and damascene processability for building of **electronic components**)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L121 ANSWER 19 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:734127 HCAPLUS
DOCUMENT NUMBER: 137:270533
TITLE: Fabrication of multilayer wiring semiconductor devices containing a heat-resistant polybenzoxazole protective film
INVENTOR(S): Kenmochi, Tomoki; Hirano, Takashi
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002278090	A2	20020927	JP 2001-78378	2001 0319
PRIORITY APPLN. INFO.:			JP 2001-78378	2001 0319

OTHER SOURCE(S): MARPAT 137:270533

AB The title semiconductor devices are fabricated by steps of: forming a heat-resistant photosensitive polybenzoxazole (or polyimide) protective film (A) on a silicon wafer, exposing A under a light source to form pattern, applying a metal layer (B) on A such as by sputtering, coating a pos. photoresist (C), e.g., AZ 1500, on B, patterning C by exposing under a light source, etching B with acid solution, and finally peeling off C using a liquid containing polyoxyalkylenes and alkanolamines, e.g., dipropylene glycol monomethyl ether and isopropanolamine, wherein B is selected from aluminum and copper.

IT **7429-90-5**, **Aluminum**, properties
7440-50-8, **Copper**, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(**metal** wiring layer; manufacture of multilayer wiring semiconductor devices containing polybenzoxazole protective film)

RN 7429-90-5 HCAPLUS

CN Aluminum (8CI, 9CI) (CA INDEX NAME)

Al

RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT **462637-10-1P**
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(preparation of polybenzoxazole precursor as protective film in multilayer wiring semiconductor devices)

RN 462637-10-1 HCAPLUS

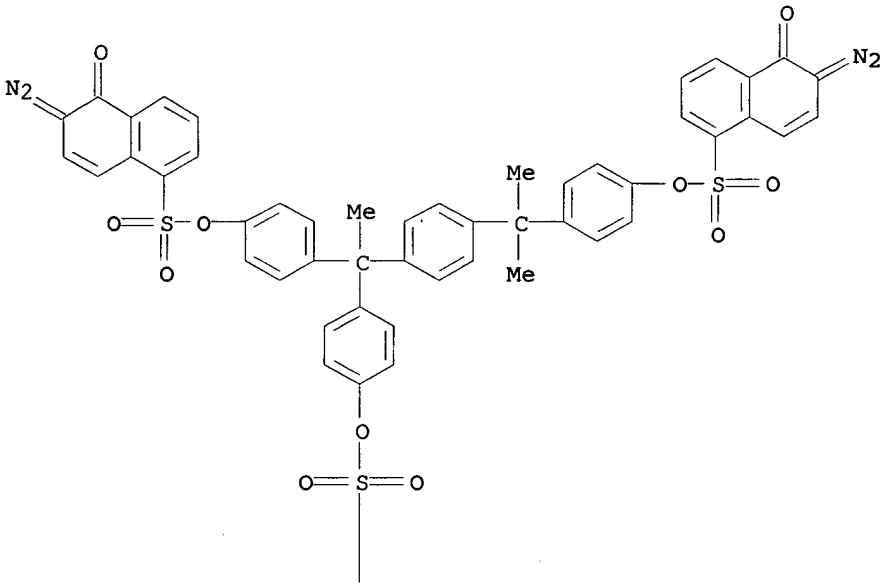
CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-benzenedicarboxylic acid, [1-[4-[1-[4-[[(6-diazo-5,6-dihydro-5-oxo-1-naphthalenyl)sulfonyl]oxy]phenyl]-1-methylethyl]phenyl]ethylidene]di-4,1-phenylene bis(6-diazo-5,6-dihydro-5-oxo-1-naphthalenesulfonate), 3a,4,7,7a-tetrahydro-4,7-methanoisobenzofuran-1,3-dione and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

CM 1

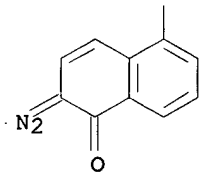
CRN 142541-99-9

CMF C59 H40 N6 O12 S3

PAGE 1-A

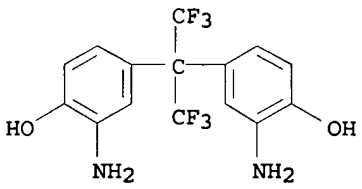


PAGE 2-A



CM 2

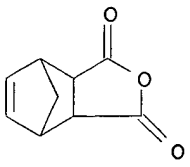
CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 3

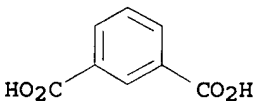
CRN 826-62-0

CMF C9 H8 O3



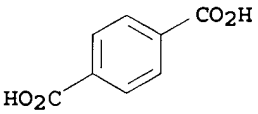
CM 4

CRN 121-91-5
CMF C8 H6 O4



CM 5

CRN 100-21-0
CMF C8 H6 O4



IC ICM G03F007-42
ICS H01L021-308; H01L021-768; C23F001-00; C23F001-02
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76
ST polybenzoxazole photosensitive heat resistant protective film semiconductor device manuf; **aluminum copper metal** multilayer wiring semiconductor device manuf; polyoxyalkylene alkanolamine pos photoresist peeling off compn
IT **7429-90-5**, **Aluminum**, properties
7440-50-8, **Copper**, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(**metal** wiring layer; manufacture of multilayer wiring semiconductor devices containing polybenzoxazole protective film)
IT 84329-57-7P, 1,3-Bis(3-aminopropyl)-1,1,3,3-tetramethyldisiloxane-4,4'-diaminodiphenyl ether-pyromellitic dianhydride copolymer
462637-10-1P 462637-11-2P
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(preparation of polybenzoxazole precursor as protective film in

multilayer wiring semiconductor devices)

L121 ANSWER 20 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:686760 HCAPLUS
DOCUMENT NUMBER: 137:239717
TITLE: Photosensitive resin composition containing alkoxysilane and heat-resistant resin
INVENTOR(S): Kaneda, Takayuki
PATENT ASSIGNEE(S): Asahi Kasei Corporation, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002258485	A2	20020911	JP 2001-55294	2001 0228

PRIORITY APPLN. INFO.: JP 2001-55294 2001 0228

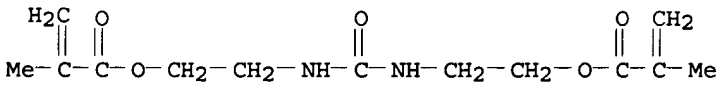
AB The photosensitive resin composition comprises (a) an alkoxysilane compound containing arylamino or pyridyl, (b) a heat-resistant resin or a precursor thereof containing a phenolic OH or carboxy, (c) a optically active component selected from quinonediazide and a photopolymn. initiator, and (d) a solvent. The photosensitive resin composition is used an insulating film fo an **electronic parts**, and exhibited excellent adhesion with a wafer after development.

IT **458525-56-9P 458525-57-0P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photosensitive resin composition containing alkoxysilane and heat-resistant resin)

RN 458525-56-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, carbonylbis(imino-2,1-ethanediyl) ester, polymer with 2-isocyanatoethyl 2-methyl-2-propenoate, 4,4'-oxybis[benzoyl chloride], oxybis(2,1-ethanediyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] and 3-[3-(trimethoxysilyl)propoxy]benzenamine (9CI) (CA INDEX NAME)

CM 1

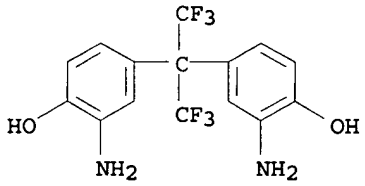
CRN 86219-64-9
CMF C13 H20 N2 O5



CM 2

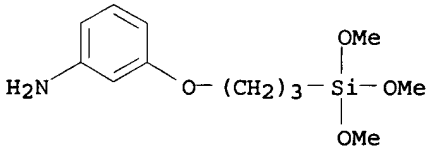
CRN 83558-87-6

CMF C15 H12 F6 N2 O2



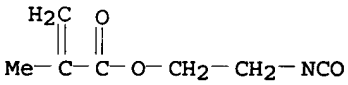
CM 3

CRN 71550-66-8
CMF C12 H21 N O4 Si



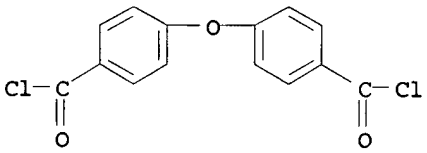
CM 4

CRN 30674-80-7
CMF C7 H9 N O3



CM 5

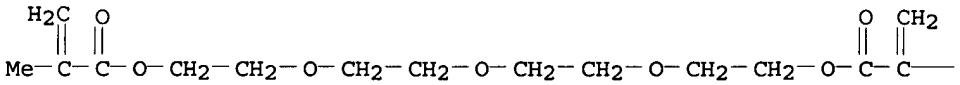
CRN 7158-32-9
CMF C14 H8 Cl2 O3



CM 6

CRN 109-17-1
CMF C16 H26 O7

PAGE 1-A



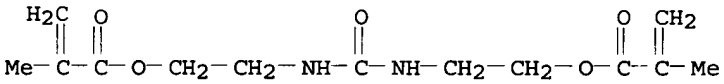
PAGE 1-B

—Me

RN 458525-57-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, carbonylbis(imino-2,1-ethanediyl) ester, polymer with 2-isocyanatoethyl 2-methyl-2-propenoate, 4,4'-oxybis[benzoyl chloride], oxybis(2,1-ethanediyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] and 2-[2-(trimethoxysilyl)ethyl]pyridine (9CI) (CA INDEX NAME)

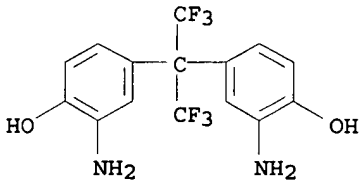
CM 1

CRN 86219-64-9
CMF C13 H20 N2 O5



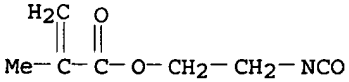
CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



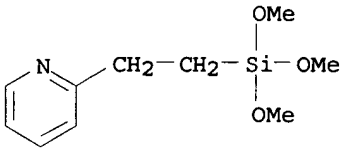
CM 3

CRN 30674-80-7
CMF C7 H9 N O3



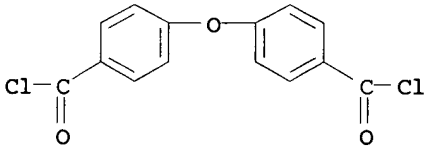
CM 4

CRN 27326-65-4
CMF C10 H17 N O3 Si



CM 5

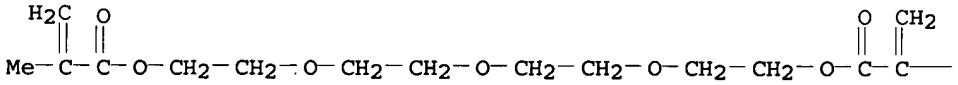
CRN 7158-32-9
CMF C14 H8 Cl2 O3



CM 6

CRN 109-17-1
CMF C16 H26 O7

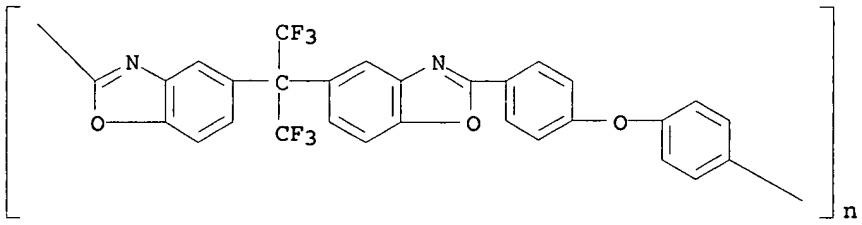
PAGE 1-A



PAGE 1-B

— Me

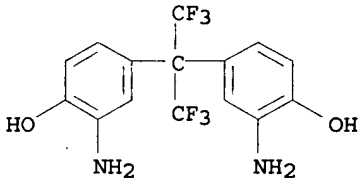
IT **112480-83-8 133440-72-9**
RL: TEM (Technical or engineered material use); USES (Uses)
(photosensitive resin composition containing alkoxysilane and heat-resistant resin)
RN 112480-83-8 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 133440-72-9 HCAPLUS
CN Benzoyl chloride, 4,4'-oxybis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

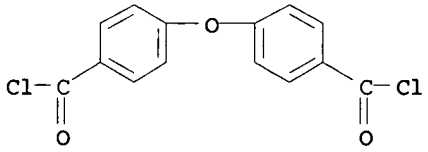
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

CRN 7158-32-9
CMF C14 H8 Cl2 O3



IC ICM G03F007-075
ICS C08K005-28; C08K005-544; C08K005-548; C08L101-06; G03F007-022; G03F007-028; G03F007-037; G03F007-038; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 76
ST photosensitive resin compn alkoxysilane heat resistant resin; **electronic parts insulating** film
photosensitive resin compn
IT **Electric apparatus**
(photosensitive resin composition as **insulating** film of **electronic devices**)
IT **Electric insulators**
(photosensitive resin composition containing alkoxysilane and

heat-resistant resin)
IT **458525-56-9P 458525-57-0P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photosensitive resin composition containing alkoxysilane and heat-resistant resin)
IT 71550-66-8 **112480-83-8 133440-72-9**
135668-77-8
RL: TEM (Technical or engineered material use); USES (Uses)
(photosensitive resin composition containing alkoxysilane and heat-resistant resin)

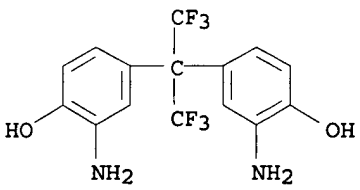
L121 ANSWER 21 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:672468 HCAPLUS
DOCUMENT NUMBER: 137:224105
TITLE: Radiation-sensitive resin compositions and their use in pattern formation for **insulator** films in **electrotonic parts**
INVENTOR(S): Sakamoto, Kei; Kawahara, Kohei
PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002249646	A2	20020906	JP 2001-51927	2001 0227
PRIORITY APPLN. INFO.:			JP 2001-51927	2001 0227

AB The compns. comprise (A) alkali-soluble resins containing 95:5-10:90 weight ratio of (1) alkali-soluble cyclic olefin polymers having Tg = T and (2) alkali-soluble precursors giving alkali-soluble resins having Tg ≥ T + 10° and/or alkali-soluble resins having Tg ≥ T + 10°, (B) CH2OR1 group-contg crosslinking agents (R1 = H, alkyl), and (C) radiation-sensitive acid generators. The compns. are applied on substrates, patterned with radiation, developed with alkaline solns., and heated for pattern formation. The compns. give heat-resistant pattern with high flatness, transparency, resistance to discoloration and solvent, and developability.
IT **178991-25-8P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radiation-sensitive resin compns. and their use in pattern formation for heat-resistant insulator films)
RN 178991-25-8 HCAPLUS
CN Benzoyl chloride, 4,4'-oxybis-, polymer with 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

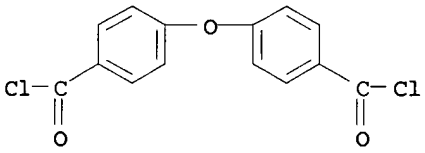
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



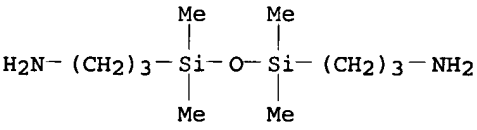
CM 2

CRN 7158-32-9
CMF C14 H8 Cl2 O3



CM 3

CRN 2469-55-8
CMF C10 H28 N2 O Si2



IC ICM C08L065-00
ICS C08K005-00; C08K005-21; C08K005-3492; C08L025-00; C08L079-04; C08L079-08; C08L081-00; G03F007-004; G03F007-038; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76

IT 108-31-6DP, Maleic anhydride, reaction products with hydrogenated polyalkenemers 87078-79-3P 131193-23-2DP, 1-Hexene-8-methyl-8-methoxycarbonyltetracyclo[4.4.0.12,5.17,10]-3-dodecene copolymer, hydrogenated, hydrolyzed 134490-17-8DP, 8-Ethyltetracyclo[4.4.0.12,5.17,10]-3-dodecene homopolymer, hydrogenated, maleated **178991-25-8P** 247579-45-9DP, hydrogenated, maleated
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radiation-sensitive resin compns. and their use in pattern formation for heat-resistant insulator films)

L121 ANSWER 22 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:656277 HCAPLUS

DOCUMENT NUMBER: 137:186730
TITLE: Heat-resistant resin compositions for **electric insulators** for semiconductor devices
INVENTOR(S): Otsuki, Tomohito
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

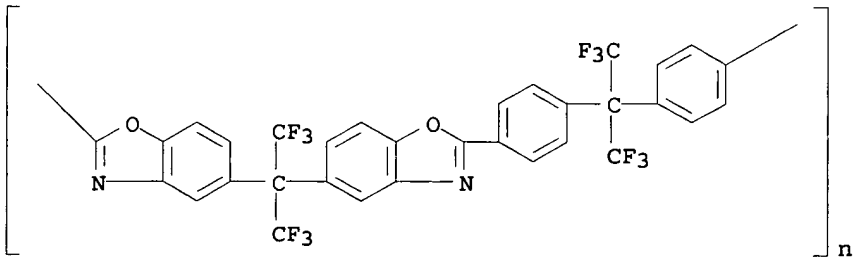
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002245855	A2	20020830	JP 2001-42481	2001 0219

PRIORITY APPLN. INFO.: JP 2001-42481 2001 0219

AB The compns. contain porous components having sp. surface area 1000-2000 m2/g and heat-resistant resins or their precursors. Thus, a composition containing 10.0 g 2,2-bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-hexafluoroisopropylidenediphenyl-1,1'-dicarbonyl dichloride copolymer (polybenzoxazole) and 0.8 g activated carbon (BET sp. surface area 2000 m2/g) was spin-coated on a silicone wafer to give a porous film having dielec. constant 2.1 and d. 1.11.

IT **112480-81-6P 112513-26-5P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-hexafluoroisopropylidene-4,4'-diphenyl-1,1'-dicarboxylic acid chloride copolymer **262352-93-2P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-2,2'-bis(trifluoromethyl)biphenyl-4,4'-dicarboxylic acid chloride copolymer **262352-95-4P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-resistant resin compns. for **elec. insulators** for semiconductor devices)

RN 112480-81-6 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)

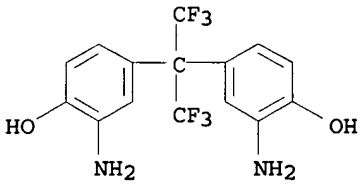


RN 112513-26-5 HCAPLUS
CN Benzoyl chloride, 4,4'-[2,2,2-trifluoro-1-

(trifluoromethyl)ethylidene]bis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

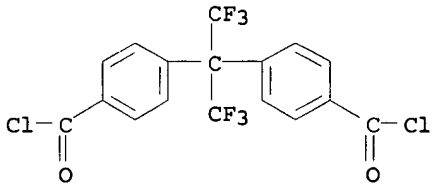
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

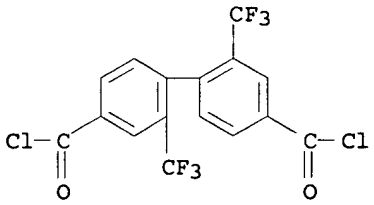
CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



RN 262352-93-2 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

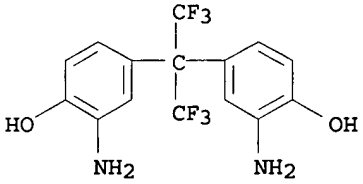
CM 1

CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2

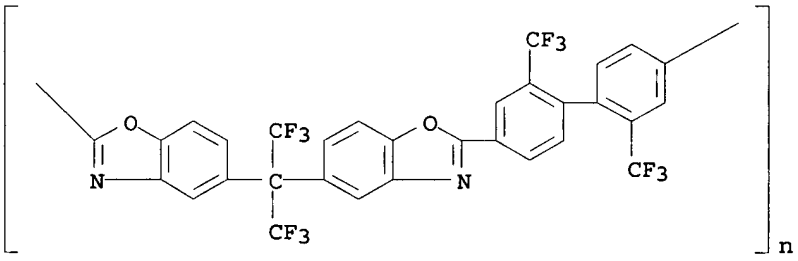


CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



RN 262352-95-4 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl[2,2'-bis(trifluoromethyl)[1,1'-biphenyl]-4,4'-diyl]] (9CI) (CA INDEX NAME)



IC ICM H01B003-30
ICS H01B003-30; C08K003-04; C08L079-04; C08L079-08; H01L021-312; H01L021-768; H01L023-14
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
ST heat resistant polybenzoxazole **elec insulator** semiconductor **device**; activated carbon polybenzoxazole porous dielec film
IT Heat-resistant materials
(dielec.; heat-resistant resin compns. for **elec. insulators** for semiconductor devices)
IT Porous materials
(films; heat-resistant resin compns. for **elec. insulators** for semiconductor devices)
IT Polyamides, uses
Polybenzoxazoles
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorine-containing; heat-resistant resin compns. for **elec. insulators** for semiconductor devices)
IT Semiconductor devices
(heat-resistant resin compns. for **elec. insulators** for semiconductor devices)
IT **Electric insulators**
(heat-resistant; heat-resistant resin compns. for **elec. insulators** for semiconductor devices)
IT Fluoropolymers, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide-; heat-resistant resin compns. for **elec. insulators** for semiconductor devices)
IT Fluoropolymers, uses

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-; heat-resistant resin compns. for **elec. insulators** for semiconductor devices)

IT Polyimides, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-; heat-resistant resin compns. for **elec. insulators** for semiconductor devices)

IT Polyethers, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide-; heat-resistant resin compns. for **elec. insulators** for semiconductor devices)

IT Films
(porous; heat-resistant resin compns. for **elec. insulators** for semiconductor devices)

IT 7440-44-0, Carbon, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(activated; heat-resistant resin compns. for **elec. insulators** for semiconductor devices)

IT **112480-81-6P 112513-26-5P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-hexafluoroisopropylidene-4,4'-diphenyl-1,1'-dicarboxylic acid chloride copolymer
262352-93-2P, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-2,2'-bis(trifluoromethyl)biphenyl-4,4'-dicarboxylic acid chloride copolymer 262352-94-3P
262352-95-4P 319913-58-1P, Biphenyltetracarboxylic acid dianhydride-2,2-bis[4-(4'-aminophenoxy)phenyl]hexafluoropropane-2,2'-bis(trifluoromethyl)-4,4'-diaminobiphenyl-hexafluoroisopropylidene-2,2'-bis(phthalic acid anhydride) copolymer 319913-59-2P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-resistant resin compns. for **elec. insulators** for semiconductor devices)

L121 ANSWER 23 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:447168 HCAPLUS
DOCUMENT NUMBER: 137:39317
TITLE: Photosensitive polymerizable compositions containing polyimide precursors, pattern formation using the compositions, and **electronic devices** having the pattern
INVENTOR(S): Nunomura, Masataka; Oe, Tadayuki; Anzai, Takanori; Fujieda, Nagatoshi
PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002169286	A2	20020614	JP 2000-364140	2000

1130

PRIORITY APPLN. INFO.: JP 2000-364140

2000
1130

AB The compns., which serve as alkali-developable neg. resists and provide surface protective films and interlayer **insulating** films for **electronic devices**, contain (a) polyimide precursors having a repeating unit [COR1(CO2R3)2CONHR2NH] (R1 = divalent organic group; R2 = divalent group having phenolic OH; R3 = H, aliphatic group), (b) photoacid generators, and (c) compds. which crosslink (a) in the presence of acids.

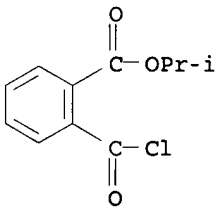
IT **436859-83-5P**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(neg. resists containing polyamic acids, photoacid generators, and crosslinking agents for semiconductor devices)

RN 436859-83-5 HCAPLUS

CN Benzoic acid, oxybis[2-(chlorocarbonyl)-, bis(1-methylethyl) ester, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

CM 1

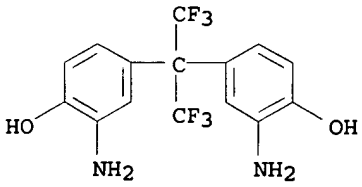
CRN 293742-31-1
CMF C22 H20 Cl2 O7
CCI IDS



1/2 (D1—O—D1)

CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



IC ICM G03F007-038

ICS C08K005-00; C08L079-08; G03F007-004; H01L021-312
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
IT 350689-69-9P **436859-83-5P**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(neg. resists containing polyamic acids, photoacid generators, and crosslinking agents for semiconductor devices)

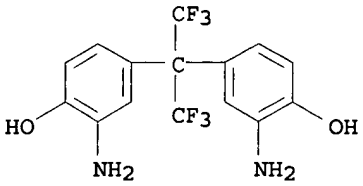
L121 ANSWER 24 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:447165 HCAPLUS
DOCUMENT NUMBER: 137:26112
TITLE: Photosensitive polymerizable compositions containing poly(hydroxyamides), pattern formation using the compositions, and **electronic devices** having the pattern
INVENTOR(S): Oe, Tadayuki; Nunomura, Masataka; Anzai, Takanori; Fujieda, Nagatoshi
PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002169283	A2	20020614	JP 2000-364142	2000 1130
PRIORITY APPLN. INFO.:			JP 2000-364142	2000 1130

OTHER SOURCE(S): MARPAT 137:26112
AB The compns., useful for formation of a surface protective film or an interlayer **insulating** film for **electronic devices**, contain (a) alkaline solution-soluble polyamides having a repeating unit [NHU(OH)2NHCOVCO] (U = tetravalent group; V = divalent group), (b) photoacid generators, (c) compds. having ≥2 acyloxymethyl group and phenolic OH group, and optionally (d) compds. which inhibit dissoln. of (a) in alkaline solution The compns. work as pos. resists, show high sensitivity, and give good profile pattern by exposure with i-line, developing, and heating.
IT **133440-72-9P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-dicarboxydiphenyl ether dichloride copolymer
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working resists containing poly(hydroxyamides), photoacid generators, and (acyloxymethyl)phenols)
RN 133440-72-9 HCAPLUS
CN Benzoyl chloride, 4,4'-oxybis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

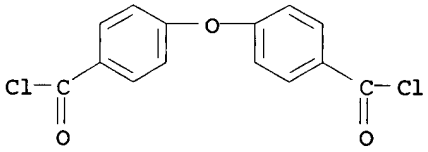
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

CRN 7158-32-9
CMF C14 H8 Cl2 O3

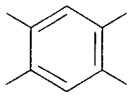


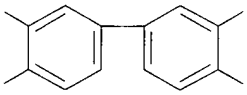
IC ICM G03F007-037
ICS C08K005-00; C08K005-03; C08K005-134; C08L077-06; G03F007-004; H01L021-027; H01L021-312
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
IT 112480-82-7P, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-dicarboxydiphenyl ether dichloride copolymer, polyamide sru
133440-72-9P, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-dicarboxydiphenyl ether dichloride copolymer
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working resists containing poly(hydroxyamides), photoacid generators, and (acyloxymethyl)phenols)

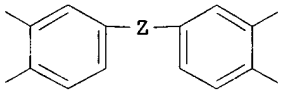
L121 ANSWER 25 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:368077 HCAPLUS
DOCUMENT NUMBER: 136:370772
TITLE: Polyamide compositions and **electrically insulating** microporous film obtained from the compositions for **electronic devices**
INVENTOR(S): Oki, Hiromi; Enoki, Naoshi; Hase, Yoko
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

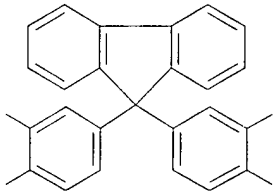
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002141344	A2	20020517	JP 2000-331231	2000 1030
PRIORITY APPLN. INFO.:			JP 2000-331231	2000 1030

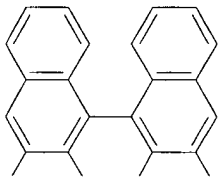
GI

Q^1 = 

Q^2 = 

Q^3 = 

Q^4 = 

Q^5 = 

AB The compns. contain (A) polyamides obtained by reaction of H2NX(OH)2NH2 [X = Q1-Q5; Z = O, SO2, CMe2, C(CF3)2, divalent aromatic substituents], compds. having d-valent amino-reactive organic groups (d = 3-10), HO2CYCO2H (Y = 1,3-phenylene, 1,4-phenylene, biphenylene, C6H4ZC6H4, naphthylene), and HO2CC6H4C.tplbond.CC6H4CO2H, and (B) oligomers. The **elec . insulating** films have a microporous polymer layer with benzoxazole structure obtained by condensation and crosslinking of the above composition under heat. Thus, a varnish containing 100 parts polyamide [prepared from 2,2-bis(3-amino-4-hydroxyphenyl)hexafluoropropane, trimesic acid trichloride, isophthaloyl dichloride, and 4,4'-tolandicarboxylic acid dichloride] and 5 parts poly(Me methacrylate) in 195 parts NMP was applied on a glass sheet and heated at 70-420° for 4.5 h to give a 10-μm microporous film with pore size ≤5 nm, dielec. constant 2.3, Tg 310°, and moisture absorption 0.3%.

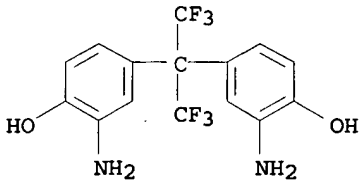
IT **393543-19-6P 423754-46-5P 423754-47-6P 423754-48-7P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide compns. for **elec. insulating** microporous films with good heat and water resistance for **electronic devices**)

RN 393543-19-6 HCAPLUS

CN 1,3-Benzenedicarbonyl dichloride, polymer with 4,4'-(1,2-ethynediyl)bis[benzoyl chloride] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

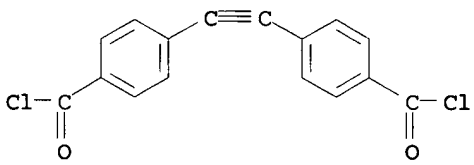
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



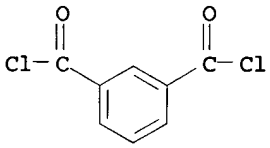
CM 2

CRN 16819-44-6
CMF C16 H8 Cl2 O2



CM 3

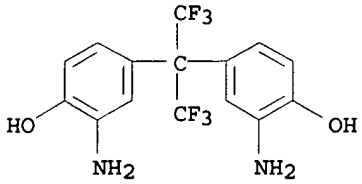
CRN 99-63-8
CMF C8 H4 Cl2 O2



RN 423754-46-5 HCAPLUS
CN 1,3,5-Benzenetricarbonyl trichloride, polymer with 1,3-benzenedicarbonyl dichloride, 4,4'-(1,2-ethynediyl)bis[benzoyl chloride] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

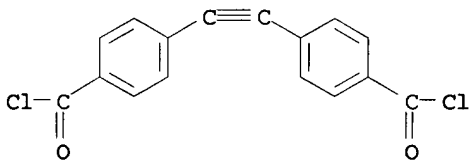
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



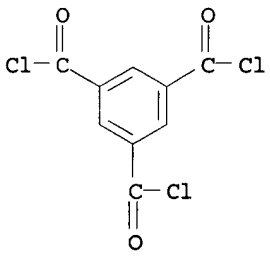
CM 2

CRN 16819-44-6
CMF C16 H8 Cl2 O2



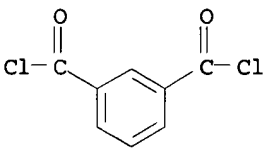
CM 3

CRN 4422-95-1
CMF C9 H3 Cl3 O3



CM 4

CRN 99-63-8
CMF C8 H4 Cl2 O2

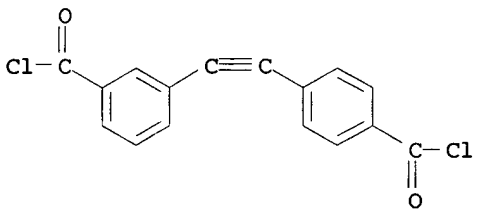


RN 423754-47-6 HCAPLUS
CN 1,3,5-Benzenetricarbonyl trichloride, polymer with 1,3-benzenedicarbonyl dichloride, 3-[[4-

(chlorocarbonyl)phenyl]ethynyl]benzoyl chloride and
3,3'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[6-aminophenol]
(9CI) (CA INDEX NAME)

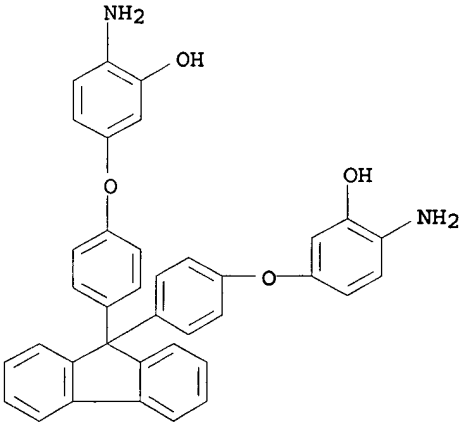
CM 1

CRN 393543-17-4
CMF C16 H8 Cl2 O2



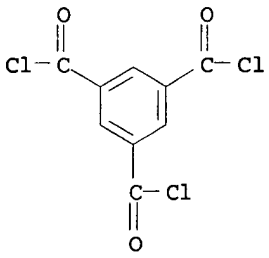
CM 2

CRN 359642-31-2
CMF C37 H28 N2 O4



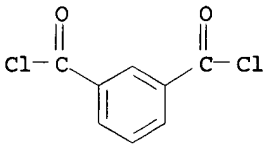
CM 3

CRN 4422-95-1
CMF C9 H3 Cl3 O3



CM 4

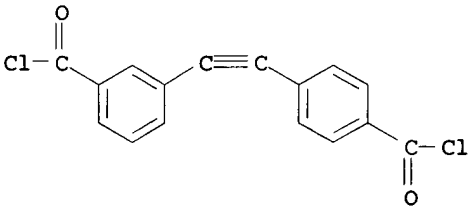
CRN 99-63-8
CMF C8 H4 Cl2 O2



RN 423754-48-7 HCAPLUS
CN 1,3,5-Benzenetricarbonyl trichloride, polymer with 3-[[4-(chlorocarbonyl)phenyl]ethynyl]benzoyl chloride and 3,3'-[9H-fluoren-9-ylidenebis(4,1-phenyleneoxy)]bis[6-aminophenol] (9CI) (CA INDEX NAME)

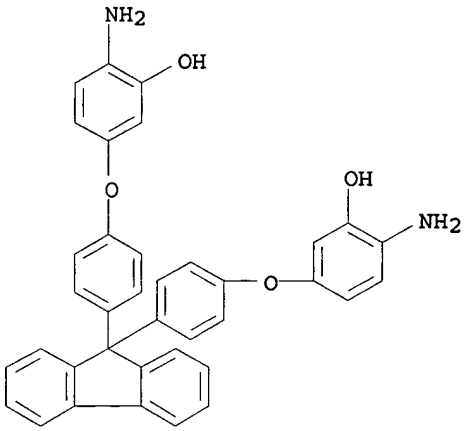
CM 1

CRN 393543-17-4
CMF C16 H8 Cl2 O2



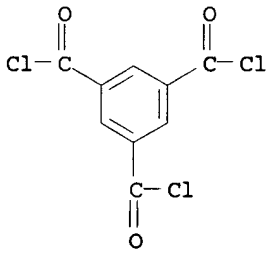
CM 2

CRN 359642-31-2
CMF C37 H28 N2 O4



CM 3

CRN 4422-95-1
CMF C9 H3 Cl3 O3



IC ICM H01L021-312
ICS C08G073-10; C08L079-08; H01B003-30; H01L021-768
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 37, 76
ST polyamide polybenzoxazole **elec insulator** film porous; aminohydroxyphenyl fluoropropane isophthalate tolandicarboxylate trimesate polymer insulator film; heat water resistance dielec film polyamide polybenzoxazole
IT Water-resistant materials
(heat-resistant; polyamide compns. for **elec. insulating** microporous films with good heat and water resistance for **electronic devices**)
IT **Electric insulators**
(polyamide compns. for **elec. insulating** microporous films with good heat and water resistance for **electronic devices**)
IT Polyoxyalkylenes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(polyamide compns. for **elec. insulating** microporous films with good heat and water resistance for **electronic devices**)
IT Polybenzoxazoles

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide-; polyamide compns. for **elec.** **insulating** microporous films with good heat and water resistance for **electronic devices**)

IT Polyamides, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-; polyamide compns. for **elec.** **insulating** microporous films with good heat and water resistance for **electronic devices**)

IT Heat-resistant materials
(water-resistant; polyamide compns. for **elec.** **insulating** microporous films with good heat and water resistance for **electronic devices**)

IT **393543-19-6P 423754-46-5P 423754-47-6P 423754-48-7P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide compns. for **elec. insulating** microporous films with good heat and water resistance for **electronic devices**)

IT 9003-11-6, Ethylene oxide-propylene oxide copolymer 9003-53-6, Polystyrene 9011-14-7, Poly(methyl methacrylate) 25322-69-4, Polypropylene oxide
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(polyamide compns. for **elec. insulating** microporous films with good heat and water resistance for **electronic devices**)

L121 ANSWER 26 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:27634 HCAPLUS
DOCUMENT NUMBER: 136:71049
TITLE: Heat-resistant resin compositions for **electric insulators**
INVENTOR(S): Ishikawa, Tadahiro; Enoki, Naoshi; Higashida, Yukihiro; Fujimoto, Masanori
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002008446	A2	20020111	JP 2000-188372	2000 0622

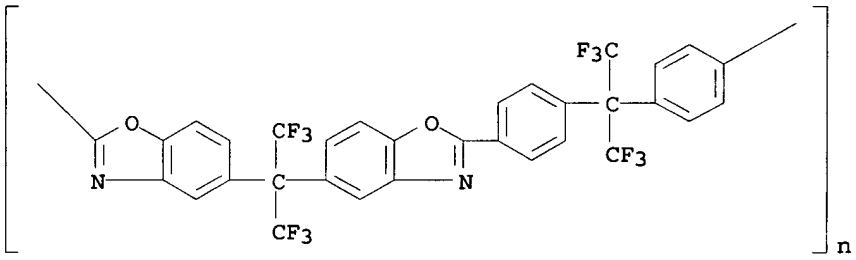
PRIORITY APPLN. INFO.: JP 2000-188372 2000 0622

AB The title compns., useful for **elec.** and **electronic devices**, printed circuit boards, etc. (no data), comprise (a) organic compds. (e.g., 2-aminoterephthalic

acid, m.p. 324°) and (b) heat-resistant resins or precursors [e.g., biphenyltetracarboxylic dianhydride-2,2-bis[4-(4-aminophenoxy)phenyl]hexafluoropropane-2,2'-bis(trifluoromethyl)-4,4'-diaminobiphenyl-hexafluoroisopropylidene-2,2'-bis(phthalic anhydride) copolymer], providing the resins or precursors have glass transition temperature higher than the decomposition temperature or sublimation temperature of the organic compds.

IT **112480-81-6 112513-26-5 262352-93-2 262352-95-4**
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(heat-resistant resin compns. for **elec. insulators**)

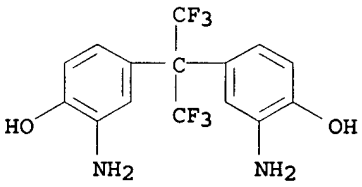
RN 112480-81-6 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 112513-26-5 HCAPLUS
CN Benzoyl chloride, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

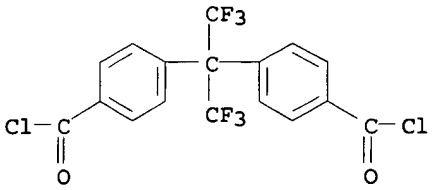
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

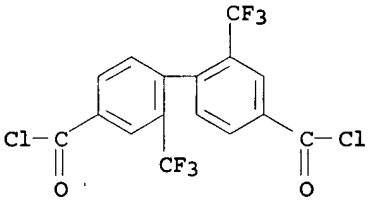
CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



RN 262352-93-2 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

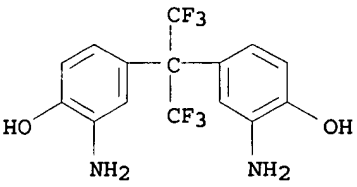
CM 1

CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2

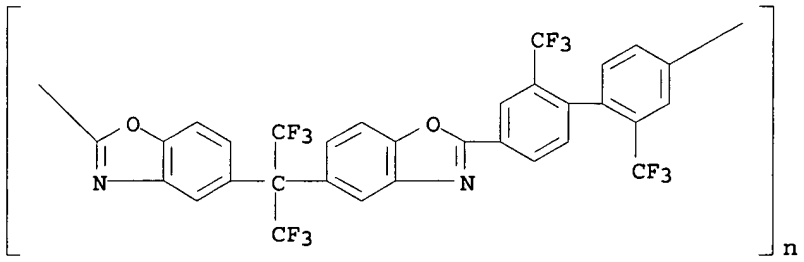


CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



RN 262352-95-4 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl[2,2'-bis(trifluoromethyl)[1,1'-biphenyl]-4,4'-diyl]] (9CI) (CA INDEX NAME)



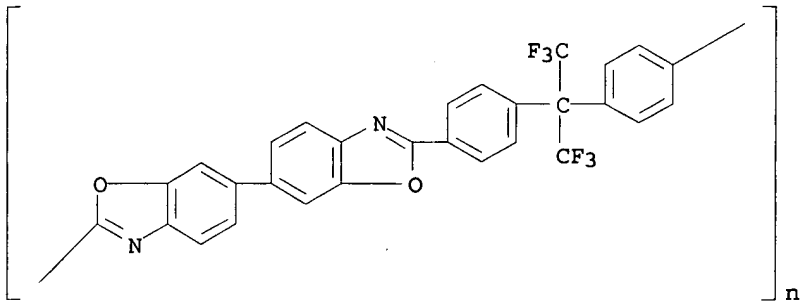
IC ICM H01B003-30
ICS H01B003-30; C08J009-04; H01L021-312; C08L079-04
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
ST polyimide aminoterephthalic acid **elec insulator** ; heat resistant polyimide org compd **elec insulator**
IT Polyamides, uses
Polybenzoxazoles
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(fluorine-containing; heat-resistant resin compns. for **elec. insulators**)
IT **Electric insulators**
(heat-resistant resin compns. for **elec. insulators**)
IT Polyamic acids
Polybenzoxazoles
Polyimides, uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(heat-resistant resin compns. for **elec. insulators**)
IT Polyimides, uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polyamide-, hydroxy-terminated; heat-resistant resin compns. for **elec. insulators**)
IT Fluoropolymers, uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polyamide-; heat-resistant resin compns. for **elec. insulators**)
IT Fluoropolymers, uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polybenzoxazole-; heat-resistant resin compns. for **elec. insulators**)
IT Polyamides, uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polyimide-, hydroxy-terminated; heat-resistant resin compns. for **elec. insulators**)
IT 55-22-1, Isonicotinic acid, uses 2835-06-5, 2-Phenylglycine 10312-55-7, 2-Aminoterephthalic acid
RL: MOA (Modifier or additive use); USES (Uses)
(heat-resistant resin compns. for **elec. insulators**)
IT 9043-05-4, 4,4'-Diaminodiphenyl ether-pyromellitic dianhydride

copolymer, sru 25036-53-7, 4,4'-Diaminodiphenyl ether-pyromellitic dianhydride copolymer, sru 25038-81-7, 4,4'-Diaminodiphenyl ether-pyromellitic dianhydride copolymer
112480-81-6 112513-26-5 113716-09-9
262352-93-2 262352-94-3 **262352-95-4**
319913-58-1
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(heat-resistant resin compns. for **elec. insulators**)

L121 ANSWER 27 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:855801 HCAPLUS
DOCUMENT NUMBER: 136:14373
TITLE: Low-dielectric-constant microporous polymers and **electronic devices** with interlayer insulators therefrom
INVENTOR(S): Fujiwara, Takenori; Mori, Yoichi; Shinba, Yoichi
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001329096	A2	20011127	JP 2001-18243	2001 0126
PRIORITY APPLN. INFO.:			JP 2000-75395 A	2000 0317

AB The polymers with average pore diameter ≤100 nm and porosity 1-50 volume% are prepared by heat treatment of reaction products of matrix polymers (A) and pyrolytic compds. (B) at a temperature higher than the pyrolysis temperature of B and lower than the heat decomposition temperature of A. The polymers exhibit excellent heat resistance and are easy to prepare
IT **146191-98-2P**, 2,2-Bis(4-carboxyphenyl)-1,1,1,3,3,3-hexafluoropropane-3,3'-dihydroxybenzidine copolymer, sru
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(microporous; microporous polymers with low dielec. constant and **electronic devices** therewith)
RN 146191-98-2 HCAPLUS
CN Poly[[6,6'-bibenzoxazole]-2,2'-diyl-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)



IC ICM C08J009-06
ICS H01L021-312; H01L021-768; C08L087-00
CC 76-14 (Electric Phenomena)
Section cross-reference(s): 38
IT Polybenzoxazoles
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(fluorine-containing, microporous; microporous polymers with low dielec. constant and **electronic devices** therewith)
IT **Electric apparatus**
Electric insulators
Thermal decomposition
(microporous polymers with low dielec. constant and **electronic devices** therewith)
IT Porous materials
(microporous, polymeric; microporous polymers with low dielec. constant and **electronic devices** therewith)
IT Polyimides, properties
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(microporous; microporous polymers with low dielec. constant and **electronic devices** therewith)
IT Fluoropolymers, properties
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(polybenzoxazole-, microporous; microporous polymers with low dielec. constant and **electronic devices** therewith)
IT Polyimides, properties
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(polyether-, fluorine-containing, microporous; microporous polymers with low dielec. constant and **electronic devices** therewith)
IT Fluoropolymers, properties
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(polyether-polyimide-, microporous; microporous polymers with low dielec. constant and **electronic devices** therewith)
IT Polyethers, properties
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(polyimide-, fluorine-containing, microporous; microporous polymers with low dielec. constant and **electronic devices** therewith)

IT Polyquinoxalines
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(polyphenylquinoxalines, microporous; microporous polymers with low dielec. constant and **electronic devices** therewith)

IT Polyoxyalkylenes, uses
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(pyrolytic crosslinking agents; microporous polymers with low dielec. constant and **electronic devices** therewith)

IT Crosslinking agents
(pyrolytic; microporous polymers with low dielec. constant and **electronic devices** therewith)

IT 24980-39-0P, 3,3',4,4'-Benzophenonetetracarboxylic acid dianhydride-4,4'-diaminodiphenyl ether copolymer 24991-11-5P, 3,3',4,4'-Benzophenonetetracarboxylic acid dianhydride-4,4'-diaminodiphenyl ether copolymer, sru 25568-77-8P 52232-62-9P 84769-07-3P, 2,2-Bis[4-(4-aminophenoxy)phenyl]hexafluoropropane-pyromellitic dianhydride copolymer, sru 84789-95-7P, 2,2-Bis[4-(4-aminophenoxy)phenyl]-1,1,1,3,3,3-hexafluoropropane-pyromellitic dianhydride copolymer **146191-98-2P**, 2,2-Bis(4-carboxyphenyl)-1,1,1,3,3,3-hexafluoropropane-3,3'-dihydroxybenzidine copolymer, sru 205751-00-4P, 2,2-Bis(4-carboxyphenyl)hexafluoropropane-3,3'-dihydroxybenzidine copolymer 375806-71-6P 375806-73-8P, 4,4'-Diamino-2,2',3,5-tetrakis(trifluoromethyl)triphenylamine-p-ethynylaniline-pyromellitic anhydride copolymer 375806-75-0P 375806-78-3P, 2-Amino-5-ethynylphenol-2,2-bis(4-carboxyphenyl)-1,1,1,3,3,3-hexafluoropropane-3,3'-dihydroxybenzidine copolymer
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(microporous; microporous polymers with low dielec. constant and **electronic devices** therewith)

IT 102-71-6, Triethanolamine, uses 25322-69-4, Polypropylene glycol 25723-16-4, Adeka T 4000 51178-86-0, Adeka EDP 1100
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(pyrolytic crosslinking agents; microporous polymers with low dielec. constant and **electronic devices** therewith)

L121 ANSWER 28 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:816269 HCAPLUS
DOCUMENT NUMBER: 135:365302
TITLE: Positive-working heat-resistant photosensitive polymer composition, method for pattern formation, and **electronic part**
INVENTOR(S): Yamazaki, Noriyuki; Oe, Tadayuki; Nunomura, Masataka; Anzai, Takanori; Fujieda, Nagatoshi
PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2001312051	A2	20011109	JP 2000-131738	2000 0428
PRIORITY APPLN. INFO.:			JP 2000-131738	2000 0428

OTHER SOURCE(S): MARPAT 135:365302

AB Claimed composition comprises (a) an alkali-soluble polyimide precursor or polyimide, (b) a photoacid generator, and (c) a compound containing alkoxymethyl group and phenolic OH group. Claimed method comprises coating the composition on a substrate, drying, light exposing, developing with an alkali developer, and then heating for pattern formation. An **electronic part** having a surface protective film or an insulating interlayer obtained from the above pattern is also claimed. The composition provides high image resolution in semiconductor device fabrication.

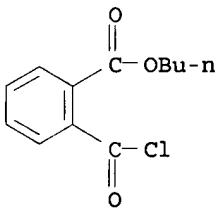
IT **372162-70-4P**
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working heat-resistant photosensitive polyimide composition for pattern formation of **electronic part**)

RN 372162-70-4 HCAPLUS

CN Benzenedicarboxylic acid, bis(chlorocarbonyl)-, dibutyl ester, polymer with dibutyl 3,3'(or 4,4')-oxybis[6-(chlorocarbonyl)benzoate] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

CM 1

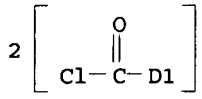
CRN 251650-61-0
CMF C24 H24 Cl2 O7
CCI IDS

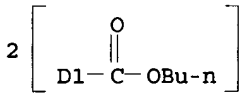


1/2 (D1—O—D1)

CM 2

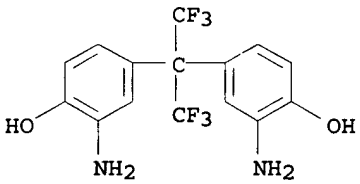
CRN 212840-09-0
CMF C18 H20 Cl2 O6
CCI IDS





CM 3

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



IC ICM G03F007-004
ICS G03F007-004; C08G073-10; C08K005-00; C08K005-02; C08K005-13; C08L079-08; G03F007-037; H01L021-027; H01L021-312

CC 76-3 (Electric Phenomena)
Section cross-reference(s): 74

IT **Electric insulators**
(interlayer for semiconductor devices; pos.-working heat-resistant photosensitive polyimide composition for pattern formation of **electronic part**)

IT Coating materials
Heat-resistant materials
Light-sensitive materials
Semiconductor device fabrication
(pos.-working heat-resistant photosensitive polyimide composition for pattern formation of **electronic part**)

IT Polyamides, uses
Polyimides, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(pos.-working heat-resistant photosensitive polyimide composition for pattern formation of **electronic part**)

IT Polyamic acids
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(pos.-working heat-resistant photosensitive polyimide composition for pattern formation of **electronic part**)

IT Positive photoresists
(sensitizer; pos.-working heat-resistant photosensitive polyimide composition for pattern formation of **electronic part**)
IT 603-44-1DP, Tris(4-hydroxyphenyl)methane, reaction products with naphthoquinonediazide 36451-09-9DP, Naphthoquinone-1,2-diazide-4-sulfonyl chloride, reaction products with hydroxyphenylmethane
RL: DEV (Device component use); MOA (Modifier or additive use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(photoacid generators; pos.-working heat-resistant photosensitive polyimide composition for pattern formation of **electronic part**)
IT 138067-07-9P 163915-33-1P, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-3,3',4,4'-biphenylsulfonetetracarboxylic acid dianhydride copolymer
163915-34-2P **372162-70-4P** 372170-81-5P
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working heat-resistant photosensitive polyimide composition for pattern formation of **electronic part**)
IT 173736-46-4 372162-72-6
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(sensitizer; pos.-working heat-resistant photosensitive polyimide composition for pattern formation of **electronic part**)

L121 ANSWER 29 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:692195 HCAPLUS
DOCUMENT NUMBER: 135:258145
TITLE: **Electrically insulating** polyimide-based compositions and their production
INVENTOR(S): Eguchi, Toshimasa; Murata, Mitsuru; Enoki, Naoshi
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001256829	A2	20010921	JP 2000-69369	2000 0313

PRIORITY APPLN. INFO.: JP 2000-69369 2000 0313

AB The title compns., with good heat resistance and useful for **elec. parts**, semiconductor **devices**, etc. (no data), comprise polyimides or precursors containing cyclobutane rings (e.g., 1,2,3,4-cyclobutanetetracarboxylic dianhydride-2,5-diamino-p-xylene copolymer, 4,4-diaminodiphenyl ether-tricyclo[6.4.0.02,7]dodecane-1,8,2,7-tetracarboxylic dianhydride copolymer) and heat-resistant materials or precursors [e.g., 2,2-bis(3-amino-4-hydroxyphenyl)hexafluoropropane-2,2'-

bis(trifluoromethyl)biphenyl-4,4'-dicarbonyl chloride, 2,2-bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-hexafluoroisopropylidenediphenyl-1,1'-dicarbonyl chloride].

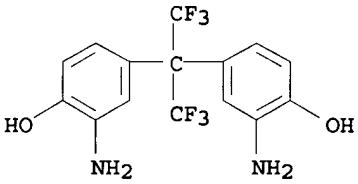
IT **112513-26-5 262352-93-2**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-2,2'-bis(trifluoromethyl)biphenyl-4,4'-dicarbonyl dichloride copolymer
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(**elec. insulating** polyimide-based compns. and production)

RN 112513-26-5 HCAPLUS

CN Benzoyl chloride, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

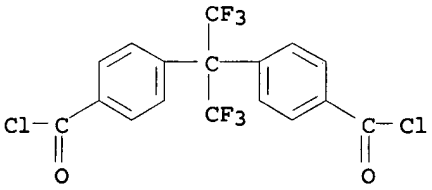
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2

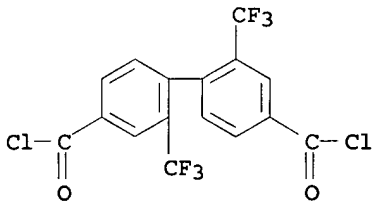


RN 262352-93-2 HCAPLUS

CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

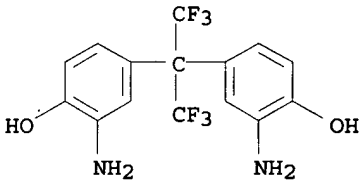
CM 1

CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2



CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



IC ICM H01B003-30
ICS H01B003-30; C08G073-10; C08L079-04; C08L079-08; C08L101-00
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
ST heat resistant polyimide **elec insulating** compn
IT **Electric insulators**
Heat-resistant materials
(**elec. insulating** polyimide-based compns. and production)
IT Polybenzoxazoles
Polyimides, uses
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(**elec. insulating** polyimide-based compns. and production)
IT 84536-77-6 84536-88-9 **112513-26-5** 113716-09-9 **262352-93-2**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-2,2'-bis(trifluoromethyl)biphenyl-4,4'-dicarbonyl dichloride copolymer 262352-94-3 361459-29-2 361459-30-5
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(**elec. insulating** polyimide-based compns. and production)

L121 ANSWER 30 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:270464 HCAPLUS
DOCUMENT NUMBER: 134:296661
TITLE: Heat-resistant polymer compositions containing polybenzoxazole precursors and bismaleimide
INVENTOR(S): Yoshida, Tatsuhiro; Nakajima, Michio
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1

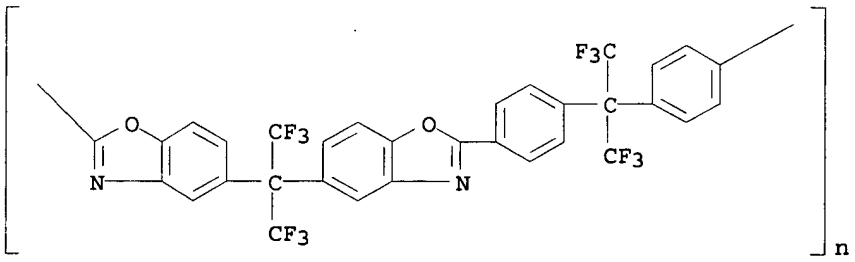
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001106784	A2	20010417	JP 1999-288816	1999 1008
PRIORITY APPLN. INFO.:			JP 1999-288816	1999 1008

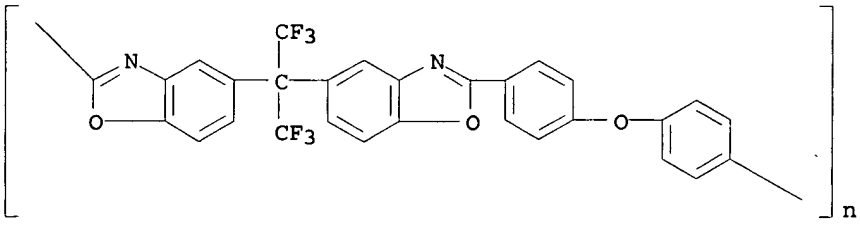
AB Title compns., useful for **elec. insulating** films in **electronic parts** and **elec.** circuits, comprise polybenzoxazole precursors -(OCNHX(OH)2NHCOY)n- (X, Y = aromatic residue; n = 2-100) and bismaleimides. Thus, 8 parts polybenzoxazole precursor prepared from 2,2'-bis(3-amino-4-hydroxyphenyl)hexafluoropropane and 4,4'-bis(chlorocarbonyl)diphenyl ether was mixed with 2,2'-bis(4-maleimidophenyl)propane 2 and N-methyl-2-pyrrolidone 30 parts, coated on a glass plate and cured to give a film showing thermal decomposition temperature 511°, water absorption 0.4%, dielec. constant 2.8 and tensile strength 93 GPa.

IT **112480-81-6P 112480-83-8P 112513-26-5P 133440-72-9P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-resistant polymer compns. containing polybenzoxazole precursors and bismaleimide)

RN 112480-81-6 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)



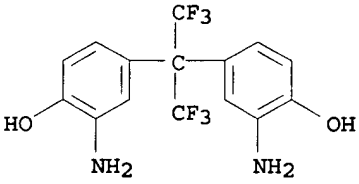
RN 112480-83-8 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 112513-26-5 HCAPLUS
CN Benzoyl chloride, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

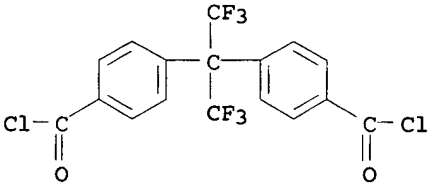
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

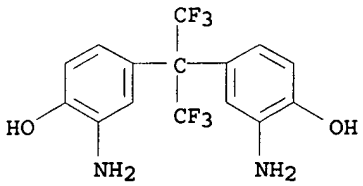
CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



RN 133440-72-9 HCAPLUS
CN Benzoyl chloride, 4,4'-oxybis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

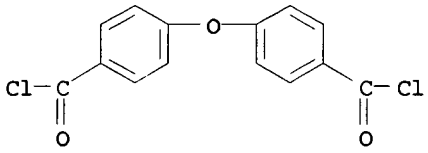
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

CRN 7158-32-9
CMF C14 H8 Cl2 O3



IC ICM C08G073-06
ICS H01B003-30
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 76
ST polybenzoxazole precursor bismaleimide compn heat resistance; **elec insulator** polybenzoxazole precursor bismaleimide compn
IT **Electric insulators**
Heat-resistant materials
(heat-resistant polymer compns. containing polybenzoxazole precursors and bismaleimide)
IT **112480-81-6P** 112480-82-7P **112480-83-8P**
112513-26-5P 113716-09-9P **133440-72-9P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-resistant polymer compns. containing polybenzoxazole precursors and bismaleimide)

L121 ANSWER 31 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:98730 HCAPLUS
DOCUMENT NUMBER: 134:164115
TITLE: Heat-resistant compns. containing heat-resistant polymers or their precursors and photodegradable polymers for insulating materials with fine voids
INVENTOR(S): Eguchi, Toshimasa; Murata, Mitsuru; Murayama, Mitsumoto
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2001035256	A2	20010209	JP 1999-209985	1999 0723

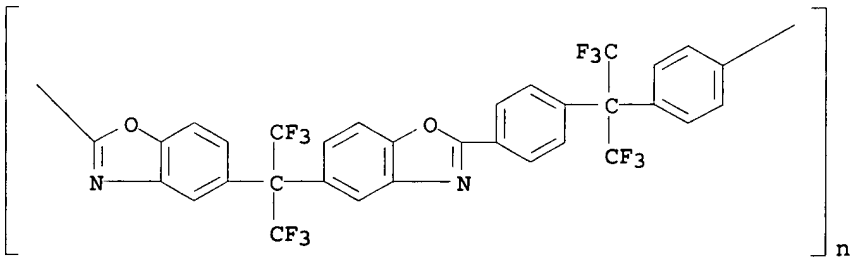
PRIORITY APPLN. INFO.: JP 1999-209985 1999 0723

AB Title composition, useful as **elec. insulators** with good heat resistance and low dielec. constant for **electricity** and **electronic equipment** and semiconductor devices, comprises (A) a photodegradable polymer [e.g., poly(Me methacrylate)], and a heat-resistant polymer and/or precursor [e.g., a polyimide prepared from 2,2-bis(4-(4,4'-aminophenoxy)phenyl)hexafluoropropane, 2,2'-bis(trifluoromethyl)-4,4'-diaminobiphenyl, biphenyltetracarboxylic acid dianhydride and hexafluoroisopropylidene-2,2-bis(phthalic anhydride)]. The photodecomposited products of the photodegradable polymers are removed from the films obtained from the compns. by thermally volatilization and solvent extraction to form the films with fine voids.

IT **112480-81-6P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-hexafluoroisopro pylidene diphenyl-1,1'-dicarboxylic dichloride copolymer, polybenzoxazole SRU **112513-26-5P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-hexafluoroisopropylidenediphe nyl-1,1'-dicarboxylic dichloride copolymer **262352-93-2P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-resistant compns. containing heat-resistant polymers or their precursors and photodegradable polymers for insulating materials with fine voids)

RN 112480-81-6 HCAPLUS

CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)



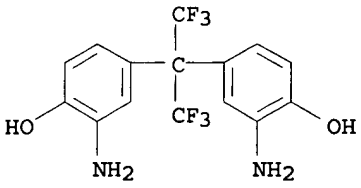
RN 112513-26-5 HCAPLUS

CN Benzoyl chloride, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

CM 1

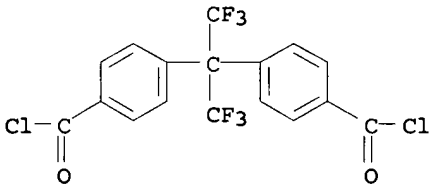
CRN 83558-87-6

CMF C15 H12 F6 N2 O2



CM 2

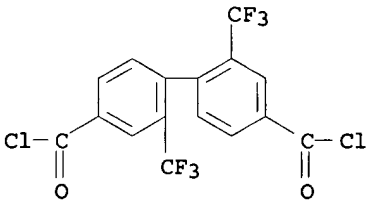
CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



RN 262352-93-2 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

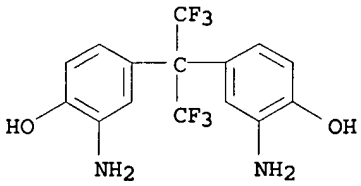
CM 1

CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2

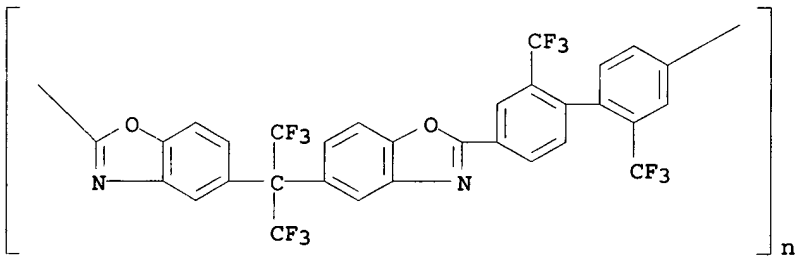


CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



IT **262352-95-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(heat-resistant compns. containing heat-resistant polymers or their precursors and photodegradable polymers for insulating materials with fine voids)
RN 262352-95-4 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl[2,2'-bis(trifluoromethyl)[1,1'-biphenyl]-4,4'-diyl]] (9CI) (CA INDEX NAME)



IC ICM H01B003-30
ICS H01B003-30; C08J003-28; C08L079-04; H01L021-312; C08J009-26; C09D005-25; C09D179-04
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
ST polyimide blend **elec insulator** heat resistance; polymethyl methacrylate photodegradable blend dielec const
IT **Electric insulators**
Semiconductor devices
(heat-resistant compns. containing heat-resistant polymers or their precursors and photodegradable polymers for insulating materials with fine voids)
IT 9043-05-4P 25036-53-7P 25038-81-7P, 4,4'-Diaminodiphenyl ether-pyromellitic dianhydride copolymer **112480-81-6P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-hexafluoroisopro pylidene diphenyl-1,1'-dicarboxylic dichloride copolymer, polybenzoxazole SRU **112513-26-5P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-hexafluoroisopropylidenediphenyl-1,1'-dicarboxylic dichloride copolymer **262352-93-2P** 262352-94-3P 319913-58-1P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-resistant compns. containing heat-resistant polymers or their precursors and photodegradable polymers for insulating materials with fine voids)
IT 1171-47-7 89803-71-4 **262352-95-4**

RL: RCT (Reactant); RACT (Reactant or reagent)
(heat-resistant compns. containing heat-resistant polymers or their precursors and photodegradable polymers for insulating materials with fine voids)

L121 ANSWER 32 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:36912 HCAPLUS
DOCUMENT NUMBER: 134:101643
TITLE: Heat-resistant resin or precursor compositions containing photopolymerable compounds for **electric insulators**
INVENTOR(S): Eguchi, Toshimasa; Murata, Mitsuru; Enoki, Hisashi
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

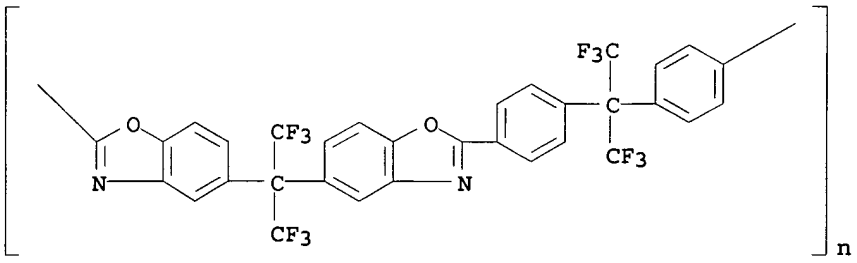
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001011181	A2	20010116	JP 1999-189108	1999 0702

PRIORITY APPLN. INFO.: JP 1999-189108 1999 0702

AB The composition, useful as **elec. insulators** with good heat and elec. characteristics for **electricity** and **electronic equipment** and semiconductor devices, comprises (A) a photopolymerable functional group-containing compound, and (B) a heat-resistant resin or its precursor, wherein glass transition temperature of the resin is higher than thermal decomposition temperature of polymerized A. Thus, 10 parts polyimide (Tg 335°) prepared from 2,2-bis(4-(4,4'-aminophenoxy)phenyl)hexafluoropropane 5.18, 2,2'-bis(trifluoromethyl)-4,4'-diaminobiphenyl 9.60, pyromellitic dianhydride 2.94, and hexafluoroisopropylidene-2,2-bis(phthalic anhydride) 13.32 parts was mixed with poly(ethylene glycol) dimethacrylate 5.0 and benzophenone 0.02 parts was spin-coated onto a silicon wafer having a tantalum layer, UV-irradiated and heat cured to give a 0.8 μm-thick film showing dielec. const.2.4.

IT **112480-81-6P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-hexafluoroisopropylidene diphenyl-1,1'-dicarboxylic dichloride copolymer, polybenzoxazole SRU **112513-26-5P 262352-93-2P 262352-95-4P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

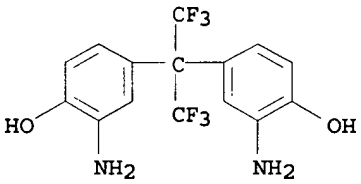
RN 112480-81-6 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 112513-26-5 HCAPLUS
CN Benzoyl chloride, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

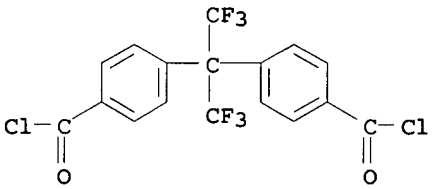
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

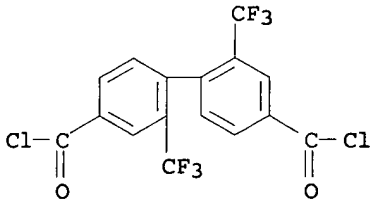
CRN 1102-92-7
CMF C17 H8 Cl2 F6 O2



RN 262352-93-2 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

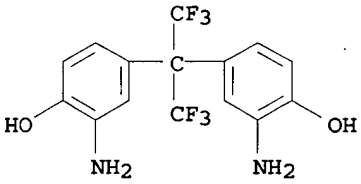
CM 1

CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2

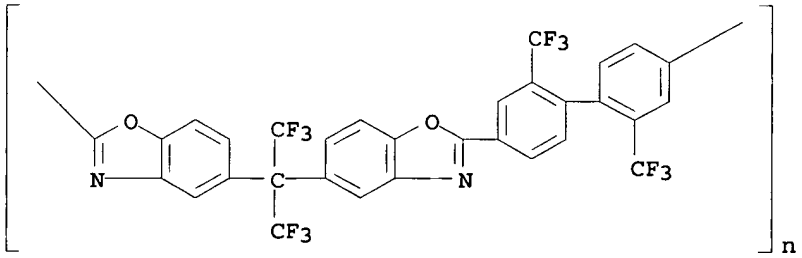


CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



RN 262352-95-4 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl[2,2'-bis(trifluoromethyl)[1,1'-biphenyl]-4,4'-diyl]] (9CI) (CA INDEX NAME)



IC ICM C08G073-22
ICS C08G073-10; H01L023-29; H01L023-31
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 76
ST heat resistance polymer **elec insulator** semiconductor; polyimide heat resistance **elec insulator**; polybenzoxazole heat resistance **elec insulator**; polyethylene glycol dimethacrylate **elec insulator**
IT Polyamides, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorine- and hydroxy-containing; heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

IT Polybenzoxazoles
Polyimides, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorine-containing; heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

IT **Electric insulators**
Heat-resistant materials
Semiconductor devices
(heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**
)

IT Polyamic acids
Polybenzoxazoles
Polyimides, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**
)

IT Polymer blends
RL: TEM (Technical or engineered material use); USES (Uses)
(heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**
)

IT Polyethers, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamic acid-, fluorine-containing; heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

IT Fluoropolymers, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamic acid-polyether-; heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

IT Fluoropolymers, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamide-, hydroxy-containing; heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

IT Fluoropolymers, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-; heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

IT Polyamic acids
Polyimides, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-, fluorine-containing; heat-resistant polyimide or

polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

IT Fluoropolymers, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-polyimide-; heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

IT Polyethers, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide-, fluorine-containing; heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

IT Fluoropolymers, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide-; heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

IT 9043-05-4P, 4,4'-Diaminodiphenyl ether-pyromellitic dianhydride copolymer, polyamic acid SRU 9051-34-7P, Polyethylene glycol dimethacrylate homopolymer 25036-53-7P, 4,4'-Diaminodiphenyl ether-pyromellitic dianhydride copolymer, polyimide sru 25038-81-7P, 4,4-Diaminodiphenyl ether-pyromellitic dianhydride copolymer 54002-11-8P 69067-16-9P **112480-81-6P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-hexafluoroisopropylidene diphenyl-1,1'-dicarboxylic dichloride copolymer, polybenzoxazole SRU **112513-26-5P** **262352-93-2P** 262352-94-3P **262352-95-4P** 295358-48-4P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

IT 1171-47-7 89803-71-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(heat-resistant polyimide or polybenzoxazole compns. containing photopolymerable compds. for **elec. insulators**)

L121 ANSWER 33 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:863751 HCAPLUS
DOCUMENT NUMBER: 134:35038
TITLE: Photosensitive resin composition for the formation of patterns in **electronic parts**
INVENTOR(S): Yamazaki, Noriyuki; Sasaki, Mamoru; Anzai, Takanori; Fujie, Nagatoshi
PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000338664	A2	20001208	JP 1999-148330	1999 0527
JP 3455697	B2	20031014		
JP 2004029712	A2	20040129	JP 2003-17698	2003 0127
PRIORITY APPLN. INFO.:			JP 1999-148330 A3	1999 0527

AB The title photosensitive resin composition comprises (A) an alkaline water-soluble polymer, (B) o-quinonediazide compound, and (C) an acidic compound The photosensitive resin composition is used as a protective film and an interlayer insulating film of an **electronic parts.** This title photosensitive resin composition has good storage stability.

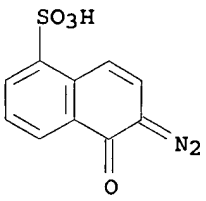
IT **312308-57-9P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photosensitive resin composition for the formation of patterns in **electronic parts**)

RN 312308-57-9 HCAPLUS

CN Benzoic acid, sulfonylbis[2-(chlorocarbonyl)-, dibutyl ester, polymer with 4,4',4''-methylidynetris[phenol] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol], 6-diazo-5,6-dihydro-5-oxo-1-naphthalenesulfonate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 20546-03-6
CMF C10 H6 N2 O4 S

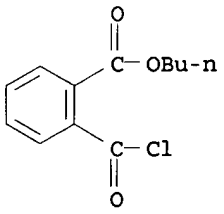


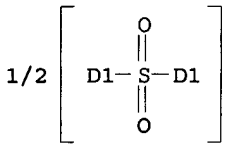
CM 2

CRN 837363-46-9
CMF (C24 H24 Cl2 O8 S . C19 H16 O3 . C15 H12 F6 N2 O2)x
CCI PMS

CM 3

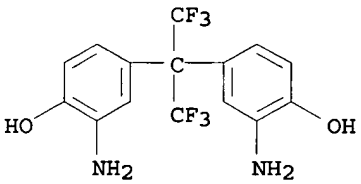
CRN 201356-56-1
CMF C24 H24 Cl2 O8 S
CCI IDS





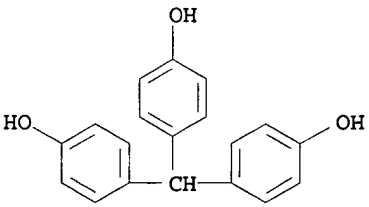
CM 4

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 5

CRN 603-44-1
CMF C19 H16 O3



IC ICM G03F007-027
ICS C08L079-06; C08L079-08; C08L101-14; G03F007-022
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 76
ST photosensitive resin compn protective film; interlayer **insulating** film **electronic parts**
IT Coating materials
Dielectric films

Photoimaging materials
(photosensitive resin composition for the formation of patterns in **electronic parts**)

IT Polyamic acids
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(photosensitive resin composition for the formation of patterns in **electronic parts**)

IT Polyimides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(photosensitive resin composition for the formation of patterns in **electronic parts**)

IT 201356-47-0P 201356-56-1P 213608-87-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(photosensitive resin composition for the formation of patterns in **electronic parts**)

IT 312308-56-8P **312308-57-9P** 312308-58-0P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photosensitive resin composition for the formation of patterns in **electronic parts**)

L121 ANSWER 34 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:835217 HCAPLUS
DOCUMENT NUMBER: 134:23499
TITLE: Heating of patterned heat-resistant resin composition film
INVENTOR(S): Okuda, Ryoji; Tomikawa, Masao; Fujita, Yoji
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000327775	A2	20001128	JP 1999-137155	1999 0518

PRIORITY APPLN. INFO.: JP 1999-137155 1999 0518

AB The pattern of the composition containing a polymer based on structural repeating unit [COR1(OH)p(CO2R3)nCONHR2(OH)qNH]m (R1 = C≥2 3-8-valent organic group; R2 = C≥2 2-6-valent organic group; R3 = H, alkali metal ion, ammonium ion, C1-20 organic group; m = 3-100,000; n = 0-2; p, q = 0-4; n + q >0) is heated at (T ± 10)° (T = m.p. of solvents contained in the polymer under 1 atm) for ≥10 min. The composition contains the polymer and a photosensitive acid-generating agent. The edge of the pattern shows retention of rectangular shape, due to the heating, in posttreatment. The process is suitable in formation of intermediate **elec. insulator** film in semiconductor devices, etc.

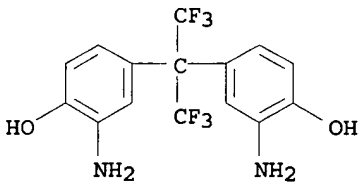
IT **112492-59-8P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-isophthaloyl dichloride copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered

material use); PREP (Preparation); USES (Uses)
(heating of heat-resistant polymer composition film photolithog. pattern for keeping shape of edge)

RN 112492-59-8 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

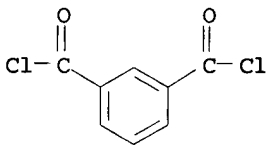
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

CRN 99-63-8
CMF C8 H4 Cl2 O2



IC ICM C08G069-26
ICS C08G073-10; C08J007-00; C08L077-06; C08L079-08; G03F007-11; H01L021-027
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76
ST heating heat resistant photolithog film pattern; edge shape rectangular retention photolithog pattern; semiconductor **device elec insulator** film photolithog
IT 84329-58-8P, 3,3',4,4'-Benzophenonetetracarboxylic dianhydride-1,3-bis(3-aminopropyl)tetramethyldisiloxane-4,4'-diaminodiphenyl ether-pyromellitic dianhydride copolymer 106709-71-1P **112492-59-8P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-isophthaloyl dichloride copolymer 113339-21-2P 231963-06-7P 232589-14-9P 251904-83-3P 261373-47-1P 261503-45-1P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(heating of heat-resistant polymer composition film photolithog. pattern for keeping shape of edge)

L121 ANSWER 35 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:769594 HCAPLUS
DOCUMENT NUMBER: 133:342600

TITLE: Photosensitive polyamide compositions, manufacture of relief patterns from the compositions, and **electric parts** thereof
INVENTOR(S): Oe, Tadayuki; Nunomura, Masataka; Yamazaki, Noriyuki; Anzai, Takanori; Fujie, Nagatoshi
PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

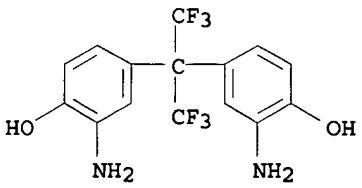
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000305268	A2	20001102	JP 1999-109443	1999 0416
PRIORITY APPLN. INFO.:			JP 1999-109443	1999 0416

AB The photosensitive compns. contain (a) aqueous alkali-soluble polyamides having mer units NHU(OH)2NHC(O)VC(O) (U = tetravalent organic group; V = divalent organic group), (b) photoacid generators, and (c) compds. selected from (c1) compds. having methylol and phenolic OH, (c2) compds. having amino and phenolic OH, (c3) compds. with 2 aromatic rings bonded via single bonds or divalent groups (methylene and alkylidene excluded) and having phenolic OH at least on 1 of the ring, and (c4) compds. with ≥3 aromatic rings, ≥1 of which have phenolic OH. The compns. may further contain (d) compds. inhibiting the polyamides' dissoln. in aqueous alkalis. The compns. are pos.-working and form heat-resistant polybenzooxazole-type polymers by heating for surface protection films and interlayer dielec. films for semiconductor devices, etc.

IT **133440-72-9P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(pos. photosensitive polyhydroxyamide compns. for manufacture of polybenzooxazole-type relief patterns)
RN 133440-72-9 HCAPLUS
CN Benzoyl chloride, 4,4'-oxybis-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

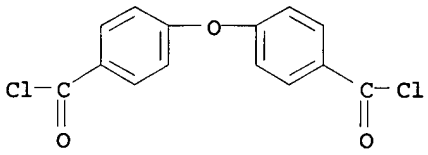
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 2

CRN 7158-32-9
CMF C14 H8 Cl2 O3



IC ICM G03F007-037
ICS C08G073-22; C08K005-00; C08K005-13; C08L079-04; G03F007-004; G03F007-40; H01L021-027
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
IT **Electric insulators**
(coatings, interlayer, for semiconductor devices; pos. photosensitive polyhydroxyamide compns. for manufacture of polybenzooxazole-type relief patterns)
IT 7158-32-9P **133440-72-9P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(pos. photosensitive polyhydroxyamide compns. for manufacture of polybenzooxazole-type relief patterns)

L121 ANSWER 36 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:733095 HCAPLUS
DOCUMENT NUMBER: 133:282253
TITLE: Fluorinated polybenzoxazoles with low dielectric constant and thermal expansion, and their precursors
INVENTOR(S): Maeda, Kazuhiko; Moroi, Nagahiro; Ishida, Michio; Tsutsumi, Kentaro
PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

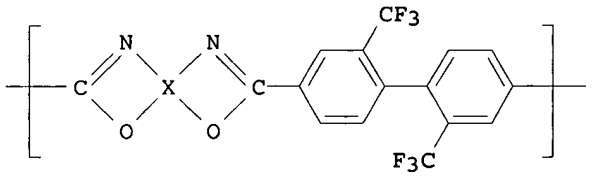
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000290374	A2	20001017	JP 1999-102482	19990409
US 6291635	B1	20010918	US 2000-544502	20000407
US 2001051705	A1	20011213	US 2001-904529	20010716
US 6384182	B2	20020507		

PRIORITY APPLN. INFO.: JP 1999-102482 A

1999
0409

US 2000-544502 A3
2000
0407

GI



I

AB The title polymers, useful for **elec.** or **electronic parts**, etc., have structural repeating units I (X = tetravalent aromatic residue; N and O in the rings are at the ortho positions in the X to form 5-membered ring). 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane was polymerized with 2,2'-bis(trifluoromethyl)-4,4'-biphenyldicarbonyl dichloride for 5 h to give F-containing polyamide with reduced viscosity 0.70 dL/g (at 30°, 0.1 g/dL in AcNMe2), which was dissolved in AcNMe2, cast on on a glass plate, and heated up to 300° to form F-containing polybenzoxazole film with dielec. constant 2.4 (1 MHz) and linear thermal expansion coefficient 2 + 10-5/°C.

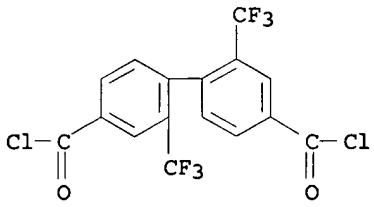
IT **262352-93-2P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-2,2'-bis(trifluoromethyl)-4,4'-biphenyldicarbonyl dichloride copolymer **262352-96-5P**, 2,2'-Bis(trifluoromethyl)-4,4'-biphenyldicarbonyl dichloride-3,3'-dihydroxy-4,4'-diamino biphenyl copolymer
RL: IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(manufacture of fluorinated polybenzoxazoles with low dielec. constant and thermal expansion for **electronic parts**)

RN 262352-93-2 HCAPLUS

CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

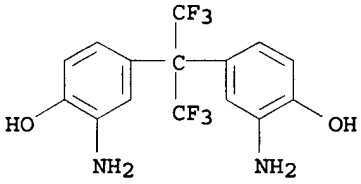
CM 1

CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2



CM 2

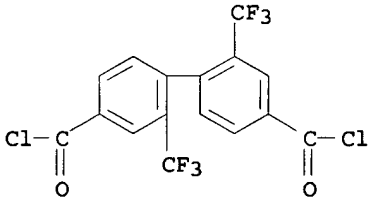
CRN 83558-87-6
CMF C15 H12 F6 N2 O2



RN 262352-96-5 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-dicarbonyl dichloride, 2,2'-bis(trifluoromethyl)-, polymer with 4,4'-diamino[1,1'-biphenyl]-3,3'-diol (9CI) (CA INDEX NAME)

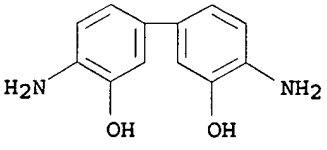
CM 1

CRN 86536-25-6
CMF C16 H6 Cl2 F6 O2

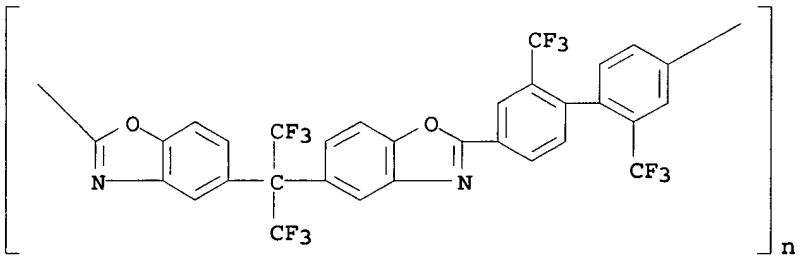


CM 2

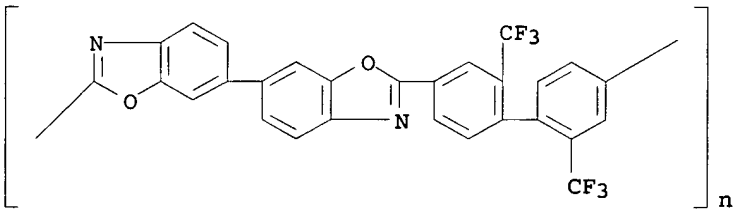
CRN 2373-98-0
CMF C12 H12 N2 O2



IT **262352-95-4P 262352-98-7P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of fluorinated polybenzoxazoles with low dielec. constant and thermal expansion for **electronic parts**)
RN 262352-95-4 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl[2,2'-bis(trifluoromethyl)[1,1'-biphenyl]-4,4'-diyl]] (9CI) (CA INDEX NAME)



RN 262352-98-7 HCAPLUS
CN Poly[[6,6'-bibenzoxazole]-2,2'-diyl[2,2'-bis(trifluoromethyl)[1,1'-biphenyl]-4,4'-diyl]] (9CI) (CA INDEX NAME)



IC ICM C08G073-22
CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 76
ST fluorinated polybenzoxazole manuf **elec insulator** ; thermal expansion low fluorinated polybenzoxazole manuf; aminohydroxyphenylhexafluoropropane fluoromethylbiphenyldicarbonyl dichloride copolymer manuf electronic
IT Polyamides, preparation
Polyamides, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(fluorine-containing, precursors; manufacture of fluorinated polybenzoxazoles with low dielec. constant and thermal expansion for **electronic parts**)
IT Polybenzoxazoles
Polybenzoxazoles
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorine-containing; manufacture of fluorinated polybenzoxazoles with low dielec. constant and thermal expansion for **electronic parts**)
IT **Electric apparatus**

Electric insulators
(manufacture of fluorinated polybenzoxazoles with low dielec. constant and thermal expansion for **electronic parts**)

IT Fluoropolymers, preparation
Fluoropolymers, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyamide-, precursors; manufacture of fluorinated polybenzoxazoles with low dielec. constant and thermal expansion for **electronic parts**)

IT Fluoropolymers, preparation
Fluoropolymers, preparation
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polybenzoxazole-; manufacture of fluorinated polybenzoxazoles with low dielec. constant and thermal expansion for **electronic parts**)

IT **262352-93-2P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-2,2'-bis(trifluoromethyl)-4,4'-biphenyldicarbonyl dichloride copolymer **262352-96-5P**, 2,2'-Bis(trifluoromethyl)-4,4'-biphenyldicarbonyl dichloride-3,3'-dihydroxy-4,4'-diamino biphenyl copolymer
RL: IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(manufacture of fluorinated polybenzoxazoles with low dielec. constant and thermal expansion for **electronic parts**)

IT **262352-95-4P 262352-98-7P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of fluorinated polybenzoxazoles with low dielec. constant and thermal expansion for **electronic parts**)

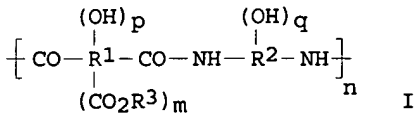
IT 262352-94-3P 262352-97-6P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture of fluorinated polybenzoxazoles with low dielec. constant and thermal expansion for **electronic parts**)

L121 ANSWER 37 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:89548 HCAPLUS
DOCUMENT NUMBER: 132:144416
TITLE: Alkaline-developable photosensitive heat-resistant polymer precursor composition
INVENTOR(S): Tomikawa, Masao; Yoshida, Naoyo; Okuda, Ryoji
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000039714	A2	20000208	JP 1999-128166	1999 0510
JP 3514167	B2	20040331		

PRIORITY APPLN. INFO.: JP 1998-131765 A 1998 0514

GI



I

AB The title composition comprises (a) polymer comprising a structuring repeating unit of I (R1 = 2- to 8-valent organic group having ≥2 carbons; R2 = 2- to 6-valent organic group containing ≥2 carbons; R3 = H, organic group containing 1-20 carbons; n = 10-100,000; m = 0, 1, 2; p, q = 0-4; m + p + q ≥1), (b) quinonediazide compound, and (c) hardening agent. The hardening agent may be epoxy resin or **metal** (Ti, **Al**, or Zr) chelate compound

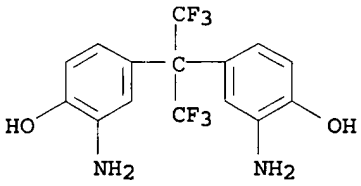
IT **257280-04-9P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-dicarboxydiphenyl ether chloride-isophthalic acid chloride copolymer
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(in alkaline-developable photosensitive heat-resistant polymer precursor composition)

RN 257280-04-9 HCAPLUS

CN 1,3-Benzenedicarbonyl dichloride, polymer with 4,4'-oxybis[benzoyl chloride] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

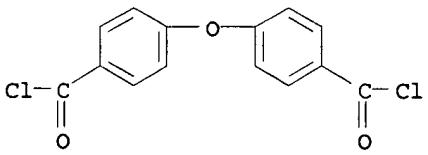
CM 1

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



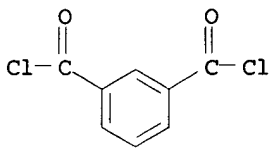
CM 2

CRN 7158-32-9
CMF C14 H8 Cl2 O3



CM 3

CRN 99-63-8
CMF C8 H4 Cl2 O2



IC ICM G03F007-037
ICS C08K005-28; C09D005-00; G03F007-022; H01L021-027; H01L021-312; H01L023-29; H01L023-31; C08L079-08; C09D179-04; C09D179-08; C08L063-00
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 42, 76
IT 25085-92-1P, 4,4'-Diaminodiphenyl ether-benzophenonetetracarboxylic dianhydride-pyromellitic anhydride copolymer 223449-04-5P, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-1,3-bis(3-aminopropyl)tetramethyldisiloxane-4,4'-diaminodiphenyl ether-trimellitic anhydride copolymer 257280-01-6P 257280-03-8P **257280-04-9P**, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-4,4'-dicarboxydiphenyl ether chloride-isophthalic acid chloride copolymer
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(in alkaline-developable photosensitive heat-resistant polymer precursor composition)

L121 ANSWER 38 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:365721 HCAPLUS
DOCUMENT NUMBER: 131:32294
TITLE: Manufacture of chlorine-free polyamides or their derivatives with no gelation
INVENTOR(S): Oe, Tadayuki; Uchimura, Shunichiro
PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11152329	A2	19990608	JP 1997-320649	1997 1121

PRIORITY APPLN. INFO.: JP 1997-320649 1997 1121

AB The polyamides or their derivs., useful for protection and **insulation** of **electronic parts**, have

COXCONHRNH unit (X = bivalent residue of tetracarboxylic acid diester or dicarboxylic acid; R = diamine residue) and are manufactured by reaction of (A) diamine compds. having phenolic OH or CO2H and (B) reactive esters [C6H3-m(NO2)2YmOCO]2X (X = same as above; Y = alkyl, halo; m = 0-3). Thus, 0.204 mol di-Ph ether 3,3',4,4'-tetracarboxylic acid di-Bu ester was esterified with equimolar 2,4-dinitrophenol in the presence of N,N'-dicyclohexylcarbodiimide, polymerized with 0.069 mol 2,2-bis(3-amino-4-hydroxyphenyl)hexafluoropropane and 0.03 mol 4,4'-diaminodiphenyl sulfone, washed, and dried to give a polyamic acid ester showing weight-average mol. weight 11,400.

IT **226908-83-4P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of chlorine-free polyamides or their derivs. with no gelation)

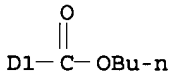
RN 226908-83-4 HCAPLUS

CN Benzenedicarboxylic acid, oxybis-, ar,ar'-dibutyl ar,ar'-bis(2,4-dinitrophenyl) ester, polymer with 4,4'-sulfonylbis[benzenamine] and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

CM 1

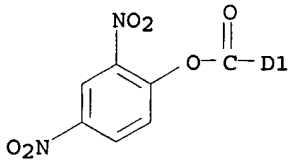
CRN 226908-82-3
CMF C36 H30 N4 O17
CCI IDS

PAGE 1-A



1/2 (D1—O—D1)

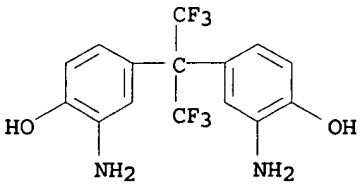
PAGE 2-A



CM 2

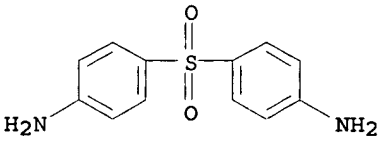
CRN 83558-87-6

CMF C15 H12 F6 N2 O2



CM 3

CRN 80-08-0
CMF C12 H12 N2 O2 S



IC ICM C08G069-26
ICS C08G073-10
CC 35-5 (Chemistry of Synthetic High Polymers)
IT 226893-11-4P **226908-83-4P** 226908-86-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of chlorine-free polyamides or their derivs. with no gelation)

L121 ANSWER 39 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:210660 HCAPLUS
DOCUMENT NUMBER: 128:283305
TITLE: Polyazole precursor compositions and **electronic parts** using the same and manufacture thereof, with low dielectric constant and film-forming temperature and good moisture resistance and environmental stability
INVENTOR(S): Kawamonzen, Yoshihiro
PATENT ASSIGNEE(S): Toshiba Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10087989	A2	19980407	JP 1996-245297	19960917
JP 3405645	B2	20030512		

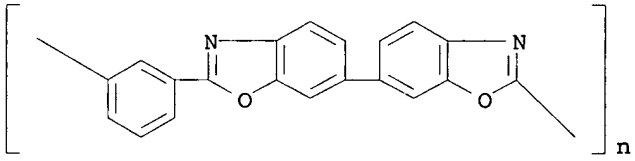
PRIORITY APPLN. INFO.: JP 1996-245297

1996
0917

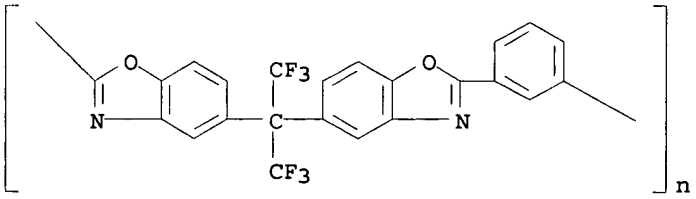
AB The title compns. are formed by compounding 1 mol polyazole precursor repeating unit -CONHX(R1)(R2)NHCOY- and -ZCONHNHCO- [X = tetravalent organic group; Y = divalent organic group; R1, R2 = OH,SH, (un)substituted amino] with ≥0.1 mol curing accelerator(s) chosen from (A) (un)substituted N-containing heterocyclic compds. having pKa in water 0-8, (B) amino acid compds. and N-acylamino acid compds., and (C) aromatic hydrocarbon compds. having ≥2 substituents chosen from carboxy, aminocarbonyl, sulfo, aminosulfonyl, acyl, carboxyalkyl, sulfoalkyl, OH, SH, amino, and aminoalkyl. Isophthalic acid-3,3'-dihydroxy-4,4'-diaminobiphenyl copolymer varnish in AcNMe2 was cured with benzimidazole with 100% cyclization.

IT **25868-25-1P 112480-78-1P 146191-98-2P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyazole precursor compns. for **electronic parts**, with low dielec. constant and film-forming temperature and good moisture resistance and environmental stability)

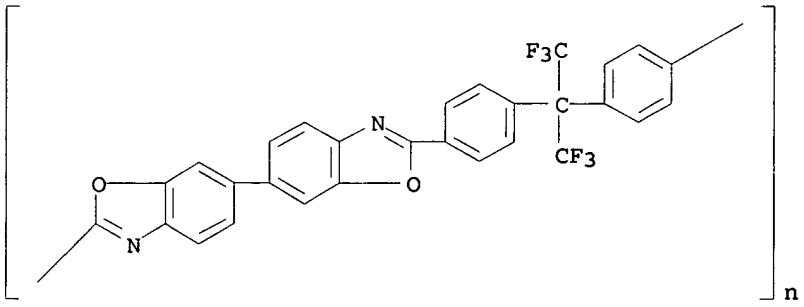
RN 25868-25-1 HCAPLUS
CN Poly([6,6'-bibenzoxazole]-2,2'-diyl-1,3-phenylene) (9CI) (CA INDEX NAME)



RN 112480-78-1 HCAPLUS
CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl-1,3-phenylene] (9CI) (CA INDEX NAME)



RN 146191-98-2 HCAPLUS
CN Poly[[6,6'-bibenzoxazole]-2,2'-diyl-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)



IC ICM C08L079-06
ICS C09D179-06; G02F001-1337
CC 37-6 (Plastics Manufacture and Processing)
ST polyazole precursor compn **electronic part**; polyoxazole precursor compn **electronic part**; curing accelerator polyazole precursor; benzimidazole curing accelerator polyazole precursor
IT Liquid crystals, polymeric
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(orientation films; polyazole precursor compns. for **electronic parts**, with low dielec. constant and film-forming temperature and good moisture resistance and environmental stability)
IT Cyclization catalysts
Polyamides, preparation
Polyhydrazides
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyazole precursor compns. for **electronic parts**, with low dielec. constant and film-forming temperature and good moisture resistance and environmental stability)
IT **Electric insulators**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyazole precursor compns. for **electronic parts**, with low dielec. constant and film-forming temperature and good moisture resistance and environmental stability)
IT Polybenzimidazoles
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyazole precursor compns. for **electronic parts**, with low dielec. constant and film-forming temperature and good moisture resistance and environmental stability)
IT Polybenzothiazoles
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyazole precursor compns. for **electronic parts**, with low dielec. constant and film-forming temperature and good moisture resistance and environmental stability)
IT Polybenzoxazoles
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyazole precursor compns. for **electronic parts**, with low dielec. constant and film-forming temperature and good moisture resistance and environmental stability)
IT Polyoxadiazoles

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyazole precursor compns. for **electronic parts**, with low dielec. constant and film-forming temperature and good moisture resistance and environmental stability)

IT 51-17-2, Benzimidazole 66-71-7, 1,10-Phenanthroline 99-06-9, 3-Hydroxybenzoic acid, uses 119-65-3, Isoquinoline 156-38-7, 4-Hydroxyphenylacetic acid 495-69-2, Hippuric acid 543-24-8, N-Acetylglycine 626-64-2, 4-Hydroxypyridine 1453-82-3, Isonicotinamide
RL: CAT (Catalyst use); USES (Uses)
(polyazole precursor compns. for **electronic parts**, with low dielec. constant and film-forming temperature and good moisture resistance and environmental stability)

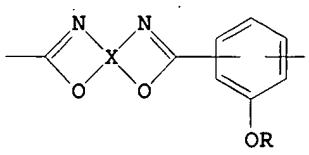
IT 25734-65-0P 25821-42-5P **25868-25-1P** 26023-46-1P 26101-19-9P 27026-22-8P 27027-96-9P 27044-31-1P 92093-07-7P **112480-78-1P** 112492-61-2P 113339-21-2P **146191-98-2P** 152243-18-0P 205751-00-4P 205751-01-5P 205751-03-7P 205751-04-8P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyazole precursor compns. for **electronic parts**, with low dielec. constant and film-forming temperature and good moisture resistance and environmental stability)

L121 ANSWER 40 OF 40 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:137264 HCAPLUS
DOCUMENT NUMBER: 120:137264
TITLE: Compositions for interlayer insulation and/or surface protection for multilayer semiconductor devices and semicondutor devices using the same
INVENTOR(S): Yusa, Masami; Takeda, Shinji; Myadera, Yasuo
PATENT ASSIGNEE(S): Hitachi Chemical Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05102125	A2	19930423	JP 1991-259521	1991 1008
JP 3006218	B2	20000207		

PRIORITY APPLN. INFO.: JP 1991-259521 1991 1008

GI



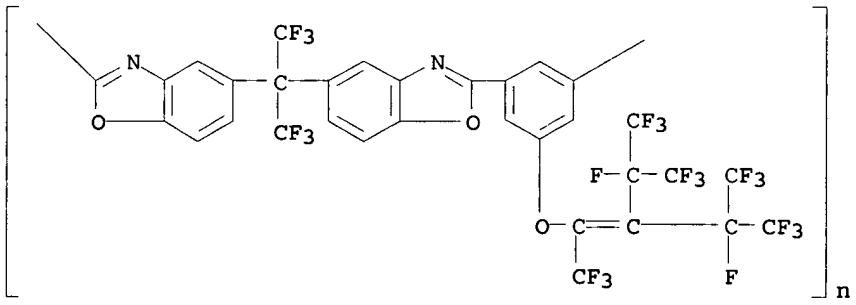
I

AB The title compns. forming heat- and moisture-resistant films with low dielec. constant contain F-containing polybenzoxazoles of the repeating unit I (R = CnF2n-1; n = 6-12; the benzene ring may be substituted; X = aromatic ring-containing tetravalent organic group for forming a pair of 5-membered rings). A solution of 2.16 g 3,3'-dihydroxy-4,4'-diaminobiphenyl in 1.74 g pyridine and 12.3 g AcNMe2 was treated with 6.49 g 3,5-(ClCO)2C6H3OC(CF3):C[CF(CF3)2]2 , stirred for 5 h, poured into a large amount of MeOH to give a polymer which was spin-coated from a 20% AcNMe2 solution and heated at 130-140° for 30 min to give an etchable insulation film with dielec. constant (1 MHz) 2.4.

IT **141188-63-8P 141188-65-0P 141206-11-3P**
141206-12-4P 141206-13-5P 141206-14-6P
RL: PREP (Preparation)
(manufacture of, heat- and water-resistant, for **elec. insulators** and surface protection coatings, for semiconductor devices)

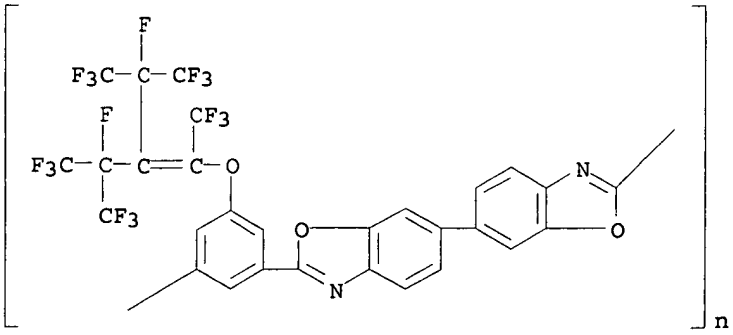
RN 141188-63-8 HCAPLUS

CN Poly[2,5-benzoxazolediyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-5,2-benzoxazolediyl[5-[[3,4,4,4-tetrafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-1,3-bis(trifluoromethyl)-1-butenyl]oxy]-1,3-phenylene]] (9CI) (CA INDEX NAME)



RN 141188-65-0 HCAPLUS

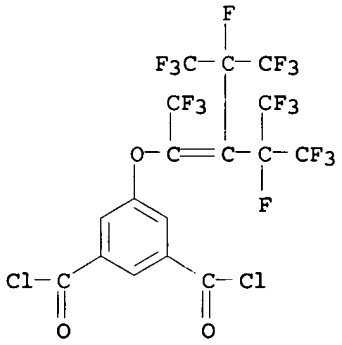
CN Poly[[6,6'-bibenzoxazole]-2,2'-diyl[5-[[3,4,4,4-tetrafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-1,3-bis(trifluoromethyl)-1-butenyl]oxy]-1,3-phenylene]] (9CI) (CA INDEX NAME)



RN 141206-11-3 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-[[3,4,4,4-tetrafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-1,3-bis(trifluoromethyl)-1-butenyl]oxy]-, polymer with 4,4'-diamino[1,1'-biphenyl]-3,3'-diol (9CI) (CA INDEX NAME)

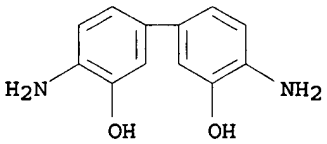
CM 1

CRN 130183-58-3
CMF C17 H3 Cl2 F17 O3



CM 2

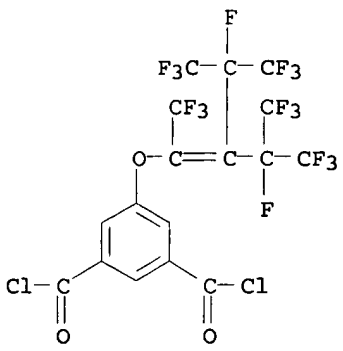
CRN 2373-98-0
CMF C12 H12 N2 O2



RN 141206-12-4 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-[[3,4,4,4-tetrafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-1,3-bis(trifluoromethyl)-1-butenyl]oxy]-, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

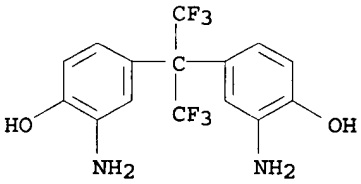
CM 1

CRN 130183-58-3
CMF C17 H3 Cl2 F17 O3



CM 2

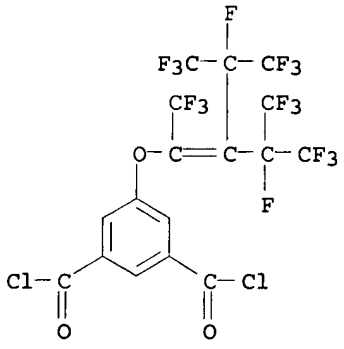
CRN 83558-87-6
CMF C15 H12 F6 N2 O2



RN 141206-13-5 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-[[3,4,4,4-tetrafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-1,3-bis(trifluoromethyl)-1-butenyl]oxy]-, polymer with 1,3-benzenedicarbonyl dichloride and 4,4'-diamino[1,1'-biphenyl]-3,3'-diol (9CI) (CA INDEX NAME)

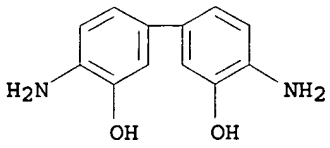
CM 1

CRN 130183-58-3
CMF C17 H3 Cl2 F17 O3



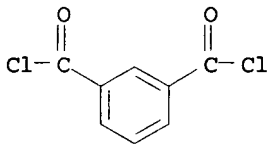
CM 2

CRN 2373-98-0
CMF C12 H12 N2 O2



CM 3

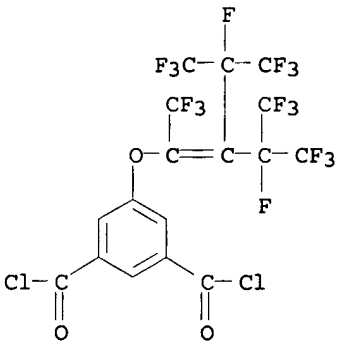
CRN 99-63-8
CMF C8 H4 Cl2 O2



RN 141206-14-6 HCAPLUS
CN 1,3-Benzenedicarbonyl dichloride, 5-[[3,4,4,4-tetrafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-1,3-bis(trifluoromethyl)-1-butenyl]oxy]-, polymer with 1,3-benzenedicarbonyl dichloride and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[2-aminophenol] (9CI) (CA INDEX NAME)

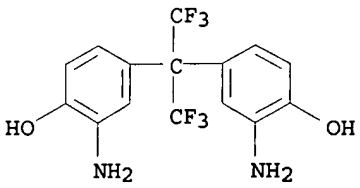
CM 1

CRN 130183-58-3
CMF C17 H3 Cl2 F17 O3



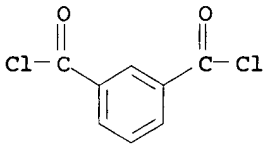
CM 2

CRN 83558-87-6
CMF C15 H12 F6 N2 O2



CM 3

CRN 99-63-8
CMF C8 H4 Cl2 O2



IC ICM H01L021-312
ICS C08G073-22; H01L021-90; H01L023-29; H01L023-31
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 76
ST polybenzoxazole **elec insulator** semiconductor **device**; fluorine contg polybenzoxazole; polyamide fluorine contg
IT Polybenzoxazoles
RL: USES (Uses)
(fluorine-containing, **elec. insulators** and surface protection coatings, heat- and moisture-resistant, with low dielec. constant, for semiconductor devices)
IT **141188-63-8P** 141188-64-9P **141188-65-0P**
141206-03-3P **141206-11-3P** **141206-12-4P**
141206-13-5P **141206-14-6P** 141206-15-7P
141206-17-9P
RL: PREP (Preparation)
(manufacture of, heat- and water-resistant, for **elec. insulators** and surface protection coatings, for semiconductor devices)

=>